

**ADOLESCENTS' PERCEPTIONS OF PARENTAL BONDING AND THE
RELATIONSHIP WITH SELF-ESTEEM, LOCUS OF CONTROL AND
AFFECT**

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Declaration

Declaration

I certify that this is a true and accurate account of the work conducted and has been composed and carried out by myself.

Emma Robinson

ABSTRACT

The period of adolescence is a time of transition characterised by a number of cognitive, social and psychological changes. Theories of adolescence have emphasised the importance of the context of development, and a number of personal traits and characteristics have been found to influence an individual's susceptibility to developing mental health problems.

Attachment theory has outlined the importance of a secure attachment between parent and child in the healthy development of a child. Individuals and their parents continue to influence each other into adolescence and investigators have linked various styles of parenting to later psychological problems by examining how individuals recall their early relations with their parents. Quality of parenting style has been shown to have an effect on later psychological functioning and studies in adolescents have looked at the correlation between parenting style and psychopathology (Burbach et al 1989, Waite et al 1994). However other personal factors, including sense of self, sense of control and affect underlie the development of many problems in adolescent populations.

This study aimed to investigate the associations between perceptions of the quality of parenting styles and various measures of psychological characteristics in a normative sample of adolescents, aged between 16 and 17 years, recruited from a local high school. It was hypothesised that adolescents' perceptions of their parents would be related to their self-esteem, locus of control and affect. The relationship between parental bonding and these three measures were examined and the results were discussed with reference to previous research findings.

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1. INTRODUCTION

1. INTRODUCTION

1.1 The nature of adolescence

The aim of this section is to review theories of adolescent development, highlight the challenges faced by young people and review empirical evidence on the development of problems during this period. Attention will be drawn to more recent theories of adolescence and changes faced by adolescents in order to outline the context of this period of development.

1.1.1.Theories of adolescent development

Adolescence was traditionally regarded as the stage in a person's life between childhood and adulthood and was viewed as a time of 'storm and stress' (Hall, 1904 in Rutter, 1995). Although this period is characterised by change, the majority of adolescents adjust relatively well and the experience may not necessarily be distressing. Between the ages of 10 and 20 years there is much individual variation in skills and experiences and theorists now prefer to think of adolescence as a period of transition from childhood to adulthood, rather than as a number of sequential stages.

In attempting to understand adolescence as a transition, theory has an important part to play. It is not possible to outline here traditional theories of adolescence, such as psychoanalytic theory and sociological approaches with their emphasis on turmoil and trauma. It is more appropriate to focus on current psychological theories of adolescence, which highlight the importance of the context of development, transitions and adaptations.

Developmental Contextualism

The main principles of this approach originate from the work of Bronfenbrenner (1989) and emphasise the importance of the environment on adolescent development. This approach encompasses the idea of continuity in human development and how individuals, and their families, influence each other. As the young person's maturation produces changes in the family, alterations in parental behaviour can, in turn, have effects on the adolescent's development. Different social influences effect adolescent development and the adolescent is part of several integrated micro-systems. The developmental contextual view rests on the idea that changing reciprocal interactions between individuals and their different contexts comprises the process of development.

Adolescence as a time of 'transitions' (Graber and Brooks-Gunn, 1996).

Adolescence is characterised by a series of transitions (biological, psychological and social) and turning points, which refer to key moments (such as changing school). Different circumstances can effect the extent to which turning points within the transitional periods are more problematic for particular individuals. These situations include;

- a) when the timing of turning points within transitional periods creates an additional stress – for example early puberty
- b) when there is a series of cumulative events or events occur simultaneously, resulting in the individual having too many things to deal with at once.

- c) when mental health problems arise at the same time as a turning point.
- d) when the context and the behaviour during transitions does not fit, for example an academic individual attending a poor school.

When considering why adolescence can be more difficult for some individuals, this approach emphasises the importance of the context of development as well as the timing of events.

Focal theory (Coleman, 1974).

Focal theory suggests that at different ages, different sorts of developmental issues come into focus. According to this model, adolescents will be able to cope successfully with stress, as long as only one issue is central at a time. The process of adaptation is therefore spread over the whole of the adolescence period, so stresses resulting from one transition (for example, puberty, cognitive and social changes) are not concentrated all at the same time. It follows from this that individuals who have more than one issue to cope with at a time are more likely to experience problems. The focal model also suggests that the individual is an agent in his or her own development and has a role to play in shaping his or her own situations (Feldman and Elliot, 1990).

1.1.2 Challenges in adolescence

The previous section has briefly outlined some of the key theories of adolescence and the overriding view of adolescence as a period of transition. This process of transition is characterised by a number of challenges, as biological, physical, cognitive and social changes are confronted. Early adolescence, from about 10 years to 13 years, is dominated by puberty; middle adolescence, from approximately 14 years to 16 years involves the transition of the self to a youth identity; and late adolescence, from roughly 17 years to 20 years, is concerned with the transition to adulthood and the independence associated with this.

Biological and physical changes

The principle physical change that adolescents undergo is puberty. Puberty is normally considered to date from the onset of menstruation in girls and the emergence of pubic hair in boys. However these changes are only a small part of the complex process that is associated with puberty. Girls begin to develop breasts, boys' voices break and the young person experiences a 'growth spurt', which is an accelerated increase in height, weight and strength. Although puberty is a normal maturation process, it can cause difficulties for some young people, as there are marked individual differences in the timing of onset of puberty and the sequence the pubertal processes take place. Particular problems may arise for individuals who are precocious in puberty or for whom puberty is significantly delayed.

Cognitive development

Development of abstract thinking

According to Piaget (1948, 1966), from the age of about 12 years, young people make the transition from 'concrete operations' to the 'formal operations' stage. They move away from the stage where they are unable to differentiate between what is perceptually given and what is mentally constructed to becoming capable of constructing 'contrary to fact' propositions. They become more capable of thinking hypothetically, dealing cognitively with abstract ideas and concepts and show an increased capacity for logical and scientific reasoning.

There have been a number of criticisms of Piaget's stage theory. One of the main problems is that Piaget assumed all individuals would reach the formal operations stage of cognitive development. However it appears that an individual may apply formal operations in some areas before others and only a minority of 16 year olds may reach this level of formal thought in all areas. There has therefore been a move away from the theories of Piaget to more contextual approaches, which focus on the processing of information in adolescence. Keating (1990) suggests that content related to social or interpersonal relationships may allow some individuals to demonstrate formal reasoning. Ward and Overton (1990) have also argued that many individuals may be competent in formal reasoning but may not perform at this level if they are not interested in the task at hand. Older adolescents also process information (Hale, 1990) at a faster rate and as well as

improving their organisational strategies. These changes are important, not only in allowing young people to complete more complex tasks, but also in the ability to think about oneself and others, leading to increased self-consciousness.

Social Cognition

Elkind (1967) developed the notion of egocentrism in adolescence by arguing that the attainment of formal operations allows the individual to think not only about his or her own thoughts but also about the thoughts of other people. Elkind argues that this ability to take into account other peoples' thinking forms the basis of adolescent egocentrism. The young person finds it difficult to differentiate between what others are thinking and his or her preoccupations and assume that people are obsessed by the same things that preoccupy them. Adolescents are concerned with how they look and make the assumption that everyone is watching them. Elkind ties this in with the idea of an 'imaginary audience', where the young person is anticipating the reaction of others in social situations. These reactions are based on the adolescent's own evaluation of themselves which could explain the increased self-consciousness of some young people.

Another significant aspect of adolescent ego-centrism is the 'personal fable', where the adolescent believes he or she is important to so many people and his or her feelings and concerns are very special or even unique. Adolescent egocentrism seems to decline from early to late adolescence (Elkind and

Bowen, 1979). More recent studies have linked adolescent egocentrism to an individual's social and emotional development rather than to cognitive ability (Jahnke and Blanchard-Fields, 1993). Selman (1980) also assumes that social cognition is concerned with how individuals learn to understand others through role taking, perspective taking and problem solving. Lack of experience in these areas can limit functioning of other awareness and can have an impact psychologically on the adolescent.

Psychosocial development

Psychosocial development is another important change and alterations in the conception of self and identity all occur over this period of development.

Self

The cognitive changes described previously allow the adolescent to develop more abstract understandings of the self and increased emotional independence could also have a bearing on self- concept development.

When compared to children, adolescents are more psychological in their descriptions of themselves and tend to focus on personal and interpersonal traits, which can often be conflicting. They are also more aware of being different sorts of people in various settings (Crockett and Peterson, 1993, Harter, 1990).

Perhaps one of the most important tasks of adolescence is the formation of a personal identity. The major physical changes, with the body changing in

appearance and function, can have a profound effect on the individual's sense of identity. The physical changes create a sense of inconsistency in the self and can effect the knowledge individuals' possess of how they appear to others, which are important elements of personal identity (Adams and Marshall, 1996). Research on the development of self-concept (Abell and Richards, 1996) has indicated that, during the early years of adolescence, both boys and girls rely on physical characteristics to describe themselves. It is therefore just at the time of rapid physical changes, that physical appearance is of the most importance for the individual in terms of identity and self-esteem.

Social Changes

It is often recognised that during adolescence there is a move away from ones' parents to a greater emphasis on acceptance by ones' peer group. The peer group therefore plays a significant role in development and friends become more important as individuals seek social support outside of the family. It is often assumed that the peer group becomes more influential than parent and family values, and, classical theories of adolescence view a move away from ones' parents as a process fraught with stress and conflict. However, studies have shown that relationships between adolescents and their parents are generally positive (Fogleman, 1976), and many adolescents do not just want to get on with their own lives but would like their parents to take part in the decision -making process in a democratic fashion. Studies have also shown a positive correlation between adolescents' well- being and

their perceptions of parental support and parental relationships seem to contribute more significantly to well-being than peer relationships (Greenberg, Siegel, and Leitch, 1983). Parents and peers have also shown not to be necessarily in opposition to each other but may be influential in different areas of an individual's life. Palmonari, Pombeni and Kirchler (1989) studied adolescents' use of different relationships in order to cope with different problems. Adolescents tended to be selective and approached either parents or peers, depending on the type of problem. Parent's counsel is often preferred to that of peers in important situations involving school issues, careers and future decisions and peer advice is more often sought for questions involving fashion, leisure and current events (Hendry, Shucksmith, Love and Glendinning, 1993).

1.1.3 Mental health problems in adolescence

Increase in behavioural and emotional problems

The period of adolescence sees a rise in the rates of problem behaviours (Peterson and Leffert, 1995) accompanied by a decline in the overall health and well being of individuals. Longitudinal research indicates an increase in the rate of emotional and behavioural problems in adolescence (Achenbach and Howell, 1993). Problems encountered in adolescence may be related to a persisting childhood problem, the stress of adolescence or the emergence of an adult problem. Many diagnosed mental health problems are reported to have their onset in adolescence (Kosky, 1992), and adolescents can face a range of difficulties including depression (Peterson et al, 1993), suicide

and self-harm (Hawton, Fagg and Sinkin 1996) and substance abuse (Leventhal and Keeshan, 1993). Although in recent decades morbidity rates for most other groups have declined, morbidity in adolescence has increased (Hamburg, 1992), and rates of completed suicide have increased at a greater rate than in other age groups (Charlton, 1995).

Adolescence is a time of individual development within different capacities. The trend of increasing amounts of problems over this period therefore seems contradictory. There are some logical explanations to this as some adolescents will develop positively and engage in some problem behaviour in order to conform with peers and adapt to the context they are in. More serious problems arise when individuals are unable to cope with the situation they are in and engage in maladaptive behaviours.

Development of mental health problems in adolescence

Although many individuals experience a relatively trouble-free transition from childhood to adulthood, others have to cope with many challenges at one time. As suggested by the models outlined above, this can lead to difficulties and the development of mental health problems. Studies suggest that there is no single source of vulnerability as individual variations in the development of problems are numerous. Development occurs in the context of an interaction between parents, peers and society. Many interacting factors including current environment, personality traits and past history contribute to adolescent susceptibility to an increased risk of mental health problems.

These factors may be classified into personal factors and contextual factors. Personal factors refer to biological and psychological characteristics of the individual and contextual factors refer to features of the psychosocial environment. Different personal characteristics such as biological factors including genetic vulnerabilities, prenatal and perinatal complications and early illnesses may predispose an individual to developing problems in later life (Rutter and Caesar, 1991). However, in addition to biological vulnerabilities, a number of psychological characteristics, traits and beliefs may also contribute to the development of psychological difficulties. These processes are shaped by a variety of environmental influences, and the impact of the social context on the development and maintenance of problem behaviours has been examined through the influence of family factors on child development (Maccoby and Martin, 1983) and the style of parenting on adolescent outcomes.

Summary

For many individuals the period of adolescence is not a time of conflict as suggested by earlier models of adolescent development, but a time characterised by a number of physical, cognitive, social and psychological changes. The number and complexity of the transitions facing adolescents also suggest that no one model can explain adolescent development. The more recent theoretical positions attempt to identify situations when difficulties might arise, namely when a number of changes and contributory factors occur together. Both personal and contextual factors influence the development and maintenance of problems in adolescence.

1.2 Personal factors in the development of psychological problems

This section aims to outline individual characteristics that may interfere with the adolescent's ability to proceed along the developmental journey towards adulthood. The developmental tasks associated with adolescence include developing an identity and achieving independence from the family whilst still remaining connected and fitting into a peer group. The adolescent's adaptation to this is influenced by a variety of issues.

An individual's self-esteem is an important underlying factor, as children who learn to describe aspects of themselves and evaluate them in a positive way are likely to do well in a number of different domains. High self-esteem is associated with a realistic view of ones' strengths and weaknesses and contributes to successful coping whilst low self-esteem has been linked to adjustment difficulties. Low self-esteem has been linked with a number of adolescent risk behaviours and it is also a key psychological variable in the development of depression in adults (Brown and Harris, 1978).

The extent to which individuals believe they have little control over sources of reinforcement is also associated with the development of psychological difficulties. These beliefs are referred to as an external locus of control (Rotter, 1966). Individuals with an internal locus of control view events as resulting from their own actions and are more likely to seek solutions to their problems.

Mood based dispositions can have implications for behaviour and interpersonal relations (Watson and Clark, 1984), and are often referred to as the two dimensions of positive and negative affectivity. High negative affectivity reflects individual differences in negative emotionality and self-concept; with these individuals tending to be distressed and holding a negative view of self, contributing to poorer adjustment. Low positive affectivity can have a bearing on childrens' interactions with others, making them less reinforcing to parents. Each of these concepts and their relevance in the development of psychological problems in children and adolescents will be outlined in this section.

1.2.1 Self-esteem

As there are a number of terms which refer to the self, for the purposes of this section, the definition given by Coleman and Hendry (1999) will be adhered to. This defines self-concept as the 'overall idea of the sense of self' and self-esteem as the 'individual's evaluation or sense of self worth.' (Coleman and Hendry, 1999, pg 53). Coppersmith (1967) defined self-esteem as the 'extent to which the individual believes himself to be capable, significant, successful and worthy'. According to Rosenberg's definition (1965, 1979), self-esteem is generally believed to refer to a person's feeling of self worth. Self-esteem is therefore an indication of the extent to which an individual values him/herself.

Factors influencing the development of self-esteem.

Interactions and experiences

The idea of self develops as a child grows and Battle views the self as 'a culmination of an individual's inherent make-up and life experience' (Battle, 1992, pg 3). Theorists offer a number of terms to describe this interaction between the child and his or hers' experiences. White (1959) referred to the term 'competence mastery' as the trait leading to children being curious about the world around them. Competence motivation leads children towards independent attempts at mastery and as they receive positive feedback for their attempts, this will lead to feelings of success and further effort. A large amount of negative feedback can result in feelings of failure.

Personal agency is another term that refers to an inner sense of capability (McGraw, 1987). Parental sensitivity is related to an improved sense of personal agency in infants (Lamb and Easterbrooks, 1981). Infants learn that they have an effect on their environment when their parents respond in an appropriate manner to their signals. Therefore it is important for children not only to learn specific skills, but to acquire an overall belief in their ability to effect their world, which is assumed to occur from interactions between infants and their caretakers. If there is no consistent approach, infants will learn that they cannot effect the world around them.

Parent / child relationships

The attachment pattern between an infant and parent has a bearing on self-esteem, with an insecure attachment being related to lower self-esteem in six -year old children (Cassidy, 1988). Both characteristics of the child and characteristics of the parent influence attachment patterns.

The importance of these social and interpersonal relationships between parent and child was the focus of research conducted by Rosenberg (1965) and Coopersmith (1967). They demonstrated that the care parents provide can have a significant influence on the development of a young person's self-esteem. The optimum conditions required for the development of high self -esteem includes the firm enforcement of limits as well as a degree of autonomy. It follows from this that an individual's beliefs about the care provided by parents can have an effect on their feelings of self-worth.

Perceptions of parents

Rosenberg (1965) measured adolescents' perceptions of their parents' interest in their activities and related these to measures of self-esteem. Adolescents who reported higher self-esteem perceived their mother as knowing most of their friends and showing positive responses to their academic achievement. In Coopersmith's (1967) study, looking at the relationship between child-rearing practices and self-esteem in adolescent males, high self- esteem was associated with parental acceptance and the setting of appropriate limits. Matteson (1974) also studied how

communication between parent and adolescent is related to self -concept.

She concluded that the way adolescents' perceived their parent's communication was associated with self-concept, and found that individuals with low self- concepts reported poorer communication with their parents.

Adams and Jones (1983), in a study of female identity development, reported that girls with a more developed sense of identity perceived their mothers as not being controlling and as promoting independent behaviour. They concluded that parents who encourage autonomy and self-exploration allow the adolescent to develop competencies and thereby enhance identity development. In a study investigating the relationship between perceptions of child rearing and self-concept, Litovsky and Dusek (1985), showed that adolescents who perceived their parents as more accepting, using less psychological control and as not being overly firm had higher self- concepts than individuals who perceived their parents as cold and rejecting.

Adolescents who viewed their parents as psychologically controlling were hindered in their attempts to gain a sense of competence and thus develop strong self-concepts.

These studies seem to suggest that adolescent self-esteem is promoted by parents who communicate, are accepting and allow autonomy in order to develop and explore personal limits and competencies, which are viewed as important aspects of the development of self- esteem (Martin, 1975).

However Litovsky and Dusek (1985) reported a lack of research relating self-esteem to perceptions of child rearing and criticised previous studies in their

lack of standardised instruments and the failure to use both sexes in several of the studies.

Peer influence

The opinion of important others is a key contributor to self-esteem in adolescence, and as individuals approach adolescence, peer influence on self-esteem becomes more significant (Rosenberg, 1979). Harter (1990) also shows there is a shift, with peers playing a larger part in determining self-esteem. Thus during childhood, parents play the most significant part in determining self-esteem but with the onset of adolescence, peer influence becomes more salient. However there is no evidence that parents stop being influential during adolescence and as highlighted in section 1.1.2 on psychosocial development (Greenberg et al, 1983), perceptions of parental support seem to contribute to well-being significantly more than peer relationships. Rosenberg's (1965) research also shows that it is not until later adolescence and early adulthood that the influence of the social environment has a greater bearing on self-esteem.

Stability of self-esteem during adolescence

Recent research (Hirsch and DuBois, 1991) has shown that different groups of young people show different trajectories of self-esteem during the adolescent period, but one third of the sample of adolescents showed that an individual's sense of self-worth increased slightly over the adolescent period. However this increase may have been preceded by an initial

decline in self-esteem in early adolescence, especially among girls (Simmons and Rosenberg, 1975). Zimmerman has also shown different trajectories of self-esteem during adolescence (Zimmerman, Copeland, Shope and Dielman, 1997). In their longitudinal study of 12 to 16-year olds, they found one group who had a consistently high level of self-esteem, another showed a rise in self-esteem, a third group showed low self-esteem and the final group reported a fall in self-esteem.

Multi-dimensional aspects of self-esteem

An individual generally does not just hold one view of themselves, but will have a number of ideas about their self-worth depending on different contexts and situations. Harter (1990), using a factor analytic procedure on a self-perception profile, identified eight specific domains; scholastic competence, job competence, athletic competence, physical appearance, social acceptance, close friendship, romantic appeal and conduct. A hierarchical model was proposed by Shavelson, Hubner and Stanton (1976) and made up of two dimensions, academic and non academic, which includes a social self-concept, emotional self-concept and physical self-concept. There has been a growing acknowledgement that it is not only self-concept that is multidimensional but that self-esteem (which is encompassed in the self-concept) is also multi-dimensional. As discussed in the section above on the development of self-esteem, a number of attributes appear to contribute to self-esteem. Hoge, Smit and Crist, (1995) reviewed studies exploring the relationship between academic achievement and self-esteem.

Although there are difficulties in defining the causal direction of such relationships, it is generally agreed that self-esteem comprises a number of social and personal components (Battle, 1992).

Self- esteem and mental health

It has long been accepted that there is a connection between perceptions of the self and the development of mental health problems. It has been apparent from the early days of research that low self-esteem is a likely predictor of adjustment difficulties, whilst those with higher self-esteem are more likely to do well in many different domains (Rosenberg, 1965). In his study of 17 to 18-year olds, Rosenberg (1965) showed that low self-esteem, characteristic of about 20 to 30% of the sample, was associated with a number of factors. Low self-esteem was related to depression, anxiety and poor academic performance. Those adolescents with low self-esteem also experienced social isolation, difficulties in social relationships and held the belief that people did not understand or respect them.

Much of the subsequent research on self-esteem has focussed on the relationship with depression. Brown and Harris (1978) saw self- esteem as an important psychological variable in the development of depression. A prospective study, carried out by Brown et al (1986), demonstrated that women with low self-esteem were twice as likely, after a stressful event, to have developed depression at one year follow up. The problem of self-esteem and depression, in adolescents, was further investigated by Battle

(1980b) and results indicated that students who obtained higher self-esteem scores tended to have lower depression scores, confirming an association in adolescence between self-esteem and depression. Bolognini, Plancherel, Bettschart and Haflon (1996) conducted a longitudinal study of adolescents, aged 12 to 14 years, in order to investigate the role played by self-esteem in mental health. They found that self-esteem correlated with anxiety and depression, with individuals with decreased self-esteem having significantly higher scores for depressive mood.

Summary

The factors determining self-esteem have been discussed with the development of self-esteem in early childhood being influenced by relationships with parents, with the encouragement of autonomy within specified firm limits being the optimum conditions for the nurturance of high self-esteem. Individuals who perceive their parents as accepting and less controlling tend to have higher self-esteem. During adolescence other factors contribute to self-esteem, but perceptions of parental support continue to influence young peoples' feelings of self worth. There is an extensive body of research linking high self-esteem with adjustment across a range of domains. Low self-esteem is seen as placing children and adolescents at risk of developing conduct and emotional problems.

1.2.2 Positive and Negative Affect

Two dominant affective dimensions arise in the literature and relate to stable personality traits (Watson, Clark and Tellegen, 1984). These factors, usually called positive affect and negative affect, are viewed as mood based dispositions that can have implications on adaptability and well-being. Foundations of individual personality can be seen in the early patterns of sociability, activity and emotionality known as temperament.

Temperament

Temperament refers to aspects of each individual child's personality, including the child's activity level, emotional responsiveness, distractibility, adaptability and quality of mood (Thomas and Chess 1977). In a 25 year long longitudinal study, Chess and Thomas (1995) classified infants into three subgroups, according to the above temperamental characteristics. These groups were referred to as 'easy' 'difficult' and 'slow to warm up' infants. 'Easy' temperament children made up 40% of the sample. Feeding and sleeping patterns were easy to establish with these children. They adapted to new situations, showed positive mood responses and low or mild intensity of reactions. They also had a good prognosis and enhanced their mother's sense of well-being, suggesting that temperament and personality contribute to the mother-child relationship. 'Difficult' temperament children constituted 10% of the sample and were more difficult to establish routines with. They tended to respond to change with negative emotions, withdrew from novel situations and were at risk of developing psychological problems.

They also seemed to be in more conflict with peers, parents and teachers and tended to elicit negative responses in others. About 15% of the sample was classified as 'slow to warm up' and initially showed mild negative responses to new situations with adaptation after repeated contact. The remaining 35% of the sample showed a mixture of characteristics and were not readily classifiable into the three categories.

Temperament has been widely researched in the child deficit model, i.e. that some aspect of the child's internal organisation is partly responsible for the development of problems, particularly externalising behaviour difficulties (Webster-Stratton and Herbert 1995). There is a strong correlation between lack of adaptability and later problems with aggression (Bates, 1990). In a longitudinal study, Bates, Bayles, Bennett, Ridge and Brown (1991) found that maternal reports of infant difficulties at six months and infant resistance to control at one year were significant predictors of externalising problems at six and eight years.

The above research has shown that, although assessments of temperament in early childhood predict later behaviour problems, the amount of variance in behavioural problems accounted for by temperament is small (Webster-Stratton and Herbert, 1995). Other factors seem to interact with temperament to influence outcome. Environmental influences such as family, social support and parental characteristics have been correlated with changes in temperament over time (Cameron, 1978). Personality patterns

can therefore change under certain circumstances and significant personal relationships and events may alter a person's characteristic temperament.

Affective states

Each individual child's early temperamental characteristics influence interaction with the environment and thereby help shape the pattern of personality development. The two dominant affective states of positive affect and negative affect have also been shown to relate to stable traits of positive and negative emotionality (Watson and Clark, 1984). Positive and negative affectivity correspond roughly to the personality factors of extroversion and neuroticism, respectively (Watson and Clark, 1984). The terms positive and negative affect may suggest these factors are opposites but theoretically they are posited as unitary concepts (Watson and Tellegen, 1985). However, in practice low negative correlations are reported (Watson, Clark and Tellegen, 1988).

Positive Affect

Positive affect reflects the extent to which a person feels enthusiastic, active and alert. High positive affect is characterised by a state of high energy, sociability, affiliation (which is associated with extroversion) and achievement motivation. Low positive affect is characterised by sadness, lethargy and fatigue. Low positive affectivity (loss of pleasurable engagement) is a distinguishing feature of depression.

Negative Affect

Negative affect is mood disposition with high negative affectivity individuals assuming a number of negative mood states including anger, fear, nervousness, and a tendency towards a negative view of the self (Watson and Tellegen, 1985). High negative affectivity is related to anxiety as it includes aspects of anxiety such as nervousness, tension and worry. It is also an underlying component of depression, encompassing feelings of sadness, guilt and anger (Watson and Clark, 1984). Low negative affectivity individuals are content, calm, satisfied with themselves and are more likely to put bad experiences behind them (Watson and Clark, 1984).

Positive and negative affectivity in children and adolescents

Much of the research on affectivity focuses on clinical populations of adults. However, King, Ollendick and Gullone (1991), in reviewing the literature on the relationship between anxiety and depression in children, found evidence of the applicability of negative affectivity to child and adolescent populations. Lonigan, Hooe, David and Kistner (1999), examined self-reported affect in school-children and their results provided support for the relationship of positive affect and negative affect to depression and anxiety, thus supporting the use of these two dimensions with younger samples. The relationships were stronger for the older sample of children, aged 14 years.

Lor and Wunderlich (1988) using a sample of high school students, found negative affect was linked to self-esteem, with subjects low in self-esteem

reporting higher negative affect than those with high self-esteem. Poor self-esteem and the negative mood of high negative affectivity appear to be linked by the degree to which these individuals tend to linger upon and magnify their mistakes. This self-focus may contribute to the distress, poorer psychological well-being and poorer adjustment that characterise high negative affectivity individuals (Clark and Watson, 1991, Dua, 1993). Bates (1990) also reported that frequent and intensive negative affect consistently predicts behaviour problems in children. Children with conduct disorders have less positive affect, seem depressed and are less reinforcing to parents, thereby setting in motion a cycle of aversive parent/child interactions (Webster-Stratton 1998).

Summary

Temperament, which refers to aspects of a child's personality, has been shown to contribute to the development of problems.

Personality characteristics have been shown to alter due to environmental circumstances, and parental characteristics have a part to play. Two dominant mood based dimensions of positive and negative affectivity have arisen in the personality literature, and high negative affectivity and low positive affectivity have a role to play in the development of anxiety and depression respectively.

1.2.3 Locus of Control

Locus of control is a conceptual framework for understanding the link between behaviour and the reinforcement contingencies that follow. The concept of locus of control was developed by Rotter (1966) and is based on social learning theory, postulating that there are individual differences in the extent to which people see control of reinforcement as being due to external circumstances or under their control. Individuals who exhibit an external locus of control perceive reinforcement, or the effect of an action of their own, as not being contingent upon that action but rather attribute the reinforcement to some external factor outside of their control, such as fate, chance, luck or powerful others. Individuals with an internal locus of control perceive that reinforcement is contingent upon their own actions and is under their control.

Locus of control and mental health

The way individuals interpret events can have an important effect on their psychological well-being, because if people feel they have no control over their future they are less likely to attempt to seek solutions to their problems. Having an internal locus of control serves as a protective factor as individuals may perceive that they can control the outcome of negative events and this belief, in turn, may serve to reduce the negative impact of events.

The concept of control plays an important part in Seligman's (1975) theory of learned helplessness. He postulated that experiences of uncontrollability can lead to the expectation that future events will also be uncontrollable which leads to learned helplessness and depression. According to Seligman, depressed individuals differ from non-depressed individuals as they expect to be unable to control future events.

The belief that sources of reinforcement are outside of one's control may cause frustration and result in negative and destructive behaviours and studies have therefore suggested a connection between external locus of control and the development of behavioural and emotional problems. Beck and Ollendick (1976) investigated the connection between delinquent behaviour in adolescents and locus of control, and found that individuals who partake in delinquent behaviour tended to view their behaviour as being controlled by factors outside of their own individual control. There is also an association between locus of control and suicidal behaviour in adolescents, with those individuals engaging in suicidal behaviour, exhibiting a more external locus of control (Pearce and Martin, 1993). In a more recent study high external locus of control scores were shown to significantly increase the risk of behaviour problems in a group of Chinese adolescents (Liu et al, 2000). These authors also report that locus of control is a personal characteristic that has consistently been shown to have a stress moderating effect in studies with children.

With regards to emotional difficulties, Henson and Chang (1998) examined the association between locus of control and positive and negative moods in college students. Individuals who scored high on internal locus of control also scored highly on dimensions of positive mood, whilst individuals with an external locus of control tended to have higher scores across different dimensions of negative mood. Kliewer and Sandler (1992) investigated the moderating effects of locus of control and self-esteem on negative life events and psychological symptoms in young people. This study found that girls who had an external locus of control and low self-esteem, when faced with many negative life events, showed the highest levels of psychological maladjustment. However, an internal locus of control was shown to buffer the effects of stress on psychological symptoms. A further study examining the relationship between negative events, locus of control and psychological adjustment in an early adolescent sample, found that individuals with an internal locus of control were more likely to experience school support as a buffer against negative events (Cauce, Hanna and Sargeant, 1992).

Parent/child relations

The period of adolescence is a time of transition to adulthood and focal theory (Coleman, 1974) has suggested the importance of personal agency in dealing with transitions, one at a time. McIntyre and Dusek (1995) examined parenting styles and coping behaviour in adolescents and found that the central mediating factor was feelings of personal control. The authors classified parenting styles using the work of Maccoby and Martin (1983),

which will be outlined in section 1.3. The four styles were authoritative, authoritarian, neglectful and permissive. Individuals who saw their parents as authoritative (warm and nurturing with appropriate limit setting) were more likely to possess a sense of competence and use social support.

Authoritative parenting was seen to foster feelings of control.

Further studies in the coping literature have demonstrated links between problem-focused coping and high levels of personal control (Compas, Banas, Malcarne and Worsham, 1991). McIntyre and Dusek (1995) went on to conclude that parental rearing practices had an indirect influence on coping dispositions in adolescence through facilitating feelings of control which in turn influence coping.

Summary

Locus of control develops as individuals interact with the world around them. There is a wealth of research exploring the relationship between locus of control and psychological well-being. Positive adjustment is associated with an internal locus of control, whilst an external locus of control is linked with difficulties in adjustment and the development of emotional and behavioural problems in children and adolescents. Research looking at adolescents and their adaptation to transitions through the process of coping has also emphasised the importance of parenting in influencing control beliefs which determines their coping disposition. It goes on to conclude that successful coping seems unlikely without a sense of control.

1.3 The quality of parental relationships and the association with psychological well-being.

As outlined above, adolescence is a time where an individual is facing new challenges and experiences. However, some young people may be more successful than others at dealing with these challenges. Whilst personal factors predispose the development of problems and serve to maintain them once they have emerge, contextual factors have been shown to account for a significant amount of the variance in most psychological characteristics (Rutter, 1991). Vulnerability to developing psychological problems is influenced by features of the parent-child relationship (Carr 1999), with a poor relationship with parents leading to difficulties in adjustment and psychological well-being.

This next section will consider the importance of attachment theory and subsequent relationships with parents in determining adaptive and maladaptive behaviour in individuals.

1.3.1 Attachment Theory and the healthy development of the child

Bowlby (1969) emphasised the important role the attachment between a parent and a child plays in the healthy development of the child. Bowlby believed attachment was an enduring affectionate bond, resulting in the feeling of safety and security. He defined attachment behavior as ' any form of behaviour that results in a person attaining or retaining proximity to some other differentiated and preferred individual'. Bowlby, and later Ainsworth

(1975), postulated that the attachment behaviour, observed in children from six months onwards, is made up of three key features:-

- 1) Proximity seeking to a preferred figure – which includes the notion that attachment is to a discriminated figure, usually the mother.
- 2) The secure base effect – which describes the atmosphere created by the attachment figure to the attached person and allows the child safe exploration of the environment around.
- 3) Separation protest – behaviours such as crying and clinging when the child perceives there is a threat to the attachment bond and uses such behaviours in order to restore the bond.

These behaviours serve the purpose of binding the child to the primary caregiver and by interpreting these behaviours, the caregiver provides the appropriate response to maintain the secure attachment.

Effects of Separation and Loss

In his initial works, Bowlby (1951) hypothesised that early experience of loss and separation from the mother was related to later psychopathology. He claimed that maternal deprivation produced physical, intellectual, behavioural and emotional damage in the child. However more recent studies have suggested that it is not the loss per se that can lead to

dysfunction, but the quality of the attachment relationship that is the determinant of dysfunction in the child.

The Strange Situation.

Ainsworth (1978) devised the Strange Situation in order to study the quality and security of mother-child interaction during the first year of life. The Strange Situation consists of a 20-minute session in which mother and child are introduced into a playroom with an experimenter. The mother then leaves the room for three minutes, leaving the child with the experimenter. After she has returned and been reunited with her child, both mother and the experimenter go out of the room, leaving the child on its own. Mother and child are then reunited. The whole procedure is videotaped and particular attention is paid on the response of the child to separation and reunion. Initially three and later four (Main, Kaplan and Cassidy, 1985) patterns of attachment were identified. These are as follows:-

- 1) Secure Attachment, where the child is usually distressed by the separation and on re union greets the parent and then returns to play.
- 2) Insecure-avoidant attachment, where the child shows few signs of distress on separation and ignores the mother on reunion.

- 3) Insecure-ambivalent, where the child is highly distressed by separation and cannot be easily pacified when the parent returns.
- 4) Insecure-disorganised, where the child shows a range of confused behaviours, including stereotyped movements and freezing, when the parent returns. This pattern is evident in only a small group of children and is a more recently identified pattern of attachment (Main et al 1985).

Since the original study, the Strange Situation has been used in a number of different studies (Ijzendoorn and Kroonenberg, 1988) and is accepted as a reliable and valid measurement of parent-child interaction. Further studies showed that mothers of secure one-year-olds were responsive to their babies and mothers of insecure-ambivalent children were inconsistently responsive, suggesting that secure attachment is a reciprocal interaction between mother and child. It also serves to confirm that it is the quality of attachment rather than the quantity, which is the important component in secure attachment.

Follow-up studies (Bretherton and Waters, 1985), have demonstrated that relationship patterns established in the first years of life continue to have a powerful influence on children's subsequent behavior, including social adjustment and self-concept, with mother-child relationships classified as secure being associated with children who are themselves secure. These children can tolerate separation and have the capacity for self-reflection.

Young people who have secure attachments experience fewer and less stressful events during school and also show higher academic performance (Burge et al, 1997). A secure attachment to parents also correlates positively with self-image, especially with aspects of the self that gain prominence in adolescence, including body image and sexuality (O'Koon, 1997).

Vulnerability to Psychiatric Disorder

Bowlby's attachment theory has outlined the links between early experiences with parents, the development of later attachment relationships and the extent to which each contributes to an individual's mental health and well-being. The quality of the parent-child attachment has been shown to have significant effects on a child's later psychological functioning (Darling and Steinberg, 1994). It follows that disturbances in parental bonding can have a negative impact on the psychosocial development of children which can place them at risk of developing psychological disorders in later life (Bowlby 1977).

Bowlby also asserted that early attachment to primary care givers had an effect on later attachment experiences. He theorised that many psychiatric problems, such as depression and anxiety, can be attributed to either deviations or failure in the development of attachment behaviour and suggested that relationships and their difficulties might influence psychiatric disorders in a number of ways. The breaking or disruption of bonds in itself could be a cause of disturbance, and the subsequent internalisation of

disturbed early attachment may influence an individual's capacity for affectional bonding in subsequent relationships. A person's current perception of their attachment relationships and the use they make of them, may therefore make them more or less vulnerable to breakdown in the face of difficulties. Insecure avoidant attachments during childhood have been linked with poor self image (O'Koon, 1997), substance abuse (Burge et al, 1997) and anxiety disorders are more likely to occur in adolescents who had anxious attachments in infancy (Warren, Huston, Edgeland and Stroufe, 1997).

1.3.2 Parental contribution to the bond between parent and child

As discussed above, the concept of a bond between parent and child is generally accepted and is thought to be influenced by characteristics of the child and characteristics of the parent, resulting in a reciprocal relationship. In examining the parental contribution to the parent-child bond, Bowlby theorised that a parent must be available, loving and responsive, demonstrating care, and should know when to intervene in their child's life to encourage their development, without becoming overprotective or neglecting. He argued that these two factors, care and control, were at the core of the parental role and if the parent is inconsistent or fails to meet the child's needs, then normal development would be disrupted.

Baumrind (1967, 1971) identified two major dimensions underlying the parent-child relationship, namely parental acceptance and parental control.

By using these dimensions of acceptance and control, Baumrind then went onto identify a number of parental styles. These are labelled 'authoritative', 'authoritarian' and 'permissive'. An authoritative style combines reasoned control with support and concern, whereas an authoritarian style involves rigid rules and low levels of acceptance. The permissive style is associated with low levels of control but an acceptance of childrens' behavior. Later studies (Maccoby and Martin, 1983) have made a distinction between permissive parenting and neglectful parenting, where neglectful parenting is associated with low levels of control and low levels of acceptance.

Baumrind (1991b) found that adolescents with authoritative parents tended to be higher in competence and self-esteem, whereas those with permissive parents (particularly neglectful parents) were the least well developed in these areas. Other studies have confirmed that young people brought up in families with authoritative parents do better in a range of areas, including self-esteem and avoiding risky behaviours such as drug taking (Steinberg, Mounts, Lamborn and Dornbusch, 1991). In a study of over 4,000, 14-18 year olds, Lamborn, Mounts, Steinberg and Dornbusch (1991), found adolescents with authoritative parents possessed more social competence and had fewer psychological and behavioural problems than adolescents with authoritarian, indulgent and neglectful parents.

Authoritative parenting is believed to be made up of three core components (Steinberg 1996). Authoritative parents show warmth, provide structure and

support autonomy in that they encourage the young person's individuality.

Research has shown that the combination of parental warmth, support and consistency are all associated with positive outcomes in children (Maccoby and Martin, 1983). Studies looking at parents of conduct disordered children have indicated that some parents exhibit fewer positive behaviours and are likely to be permissive and inconsistent in their management of behaviour (Webster-Stratton 1985). In a more recent study, Shucksmith, Hendry and Glendinning (1995) examined families of adolescents in Scotland, looking at parenting styles and other variables including school integration, psychological well-being, family composition and social background.

Permissive parenting was the most common style reported in the sample but their results identified four distinct patterns of parenting, thus reinforcing the model proposed by Baumrind and Maccoby and Martin. Symptoms of psychological distress were associated with dysfunctional parent-adolescent relationships, and young people from families with authoritative parents were least likely to report symptoms of psychological distress, irrespective of home background and family context. The authors in this study concluded that young peoples' subjective perceptions of their parents have important consequences for psychosocial development in adolescence, with authoritative parenting being the most effective style.

1.3.3 Measures of parental attitudes and behaviours

Rutter (1972), in reviewing studies on parental qualities, identified a loving relationship leading to an unbroken attachment to one specific person in the family, who provides adequate stimulation, as characteristics necessary for adequate parenting. Rutter concluded that there are a number of other aspects to the relationship with both parents that are significant and called for studies of the child's perception of their parents in order to gain further insight into the etiology of different psychological problems. This interest in the relationship between parent and child and its association with later functioning has led to the development of a number of instruments to look at parental bonding in order to measure this relationship empirically.

The Egna Minnen Beträffande Uppfostran

The Egna Minnen Beträffande Uppfostran (EMBU) (Perris, Jacobsson, Lindstrom, von Knorring and Perris, 1980) was developed as a multidimensional measure of parental bonding. It was developed from Swedish populations and measured the dimensions of care and strict control. It has been used as part of a cross cultural study of parental bonding and child psychopathology (Richter, Eiseman and Perris, 1990). It has also been used in a number of studies, examining parental bonding in patients with depression (Perris, 1983) and phobias (Arrindell, Emmelkamp, Brilman and Monasma, 1983). However as a measure of the parent child relationship, it has not had as much international distribution as the Parental Bonding Instrument, discussed below (Pedersen, 1994).

The Adult Attachment Interview

The Adult Attachment Interview was devised by Main (1985), as a tool for assessing individuals' childhood attachment experiences and the impact of these on their current functioning. It is a semi-structured interview where individuals are asked to choose five adjectives to describe their relationship with each parent during childhood and to illustrate these with specific memories. The technique has often been referred to as attempting to 'surprise the unconscious into self-revelation' (Main 1991). The responses are transcribed verbatim and are then assigned to one of four categories, autonomous secure, dismissing-detached, preoccupied-entangled and unresolved-disorganised. Several studies have shown consistent correlations between the attachment pattern of infants in the Strange Situations and their mothers in the Adult Attachment Interview (Main and Goldwyn 1984). The majority of secure infants had mothers who were rated secure autonomous, whilst infants with an ambivalent pattern of attachment had mothers who tended to be dismissing- detached. Fonagy, Steele, Steele, Moran and Higgins (1991) found that the Adult Attachment Interview administered during pregnancy predicted infant attachment status at one year with 70% accuracy. However the Adult Attachment Interview requires a two-week course and reliability testing. It takes up to half a day to reliably code a transcript, making it a time consuming assessment to use.

The Parental Bonding Instrument.

The Parental Bonding Instrument developed by Parker, Tupling and Brown (1979) was designed to assess adult respondents' perceptions of their

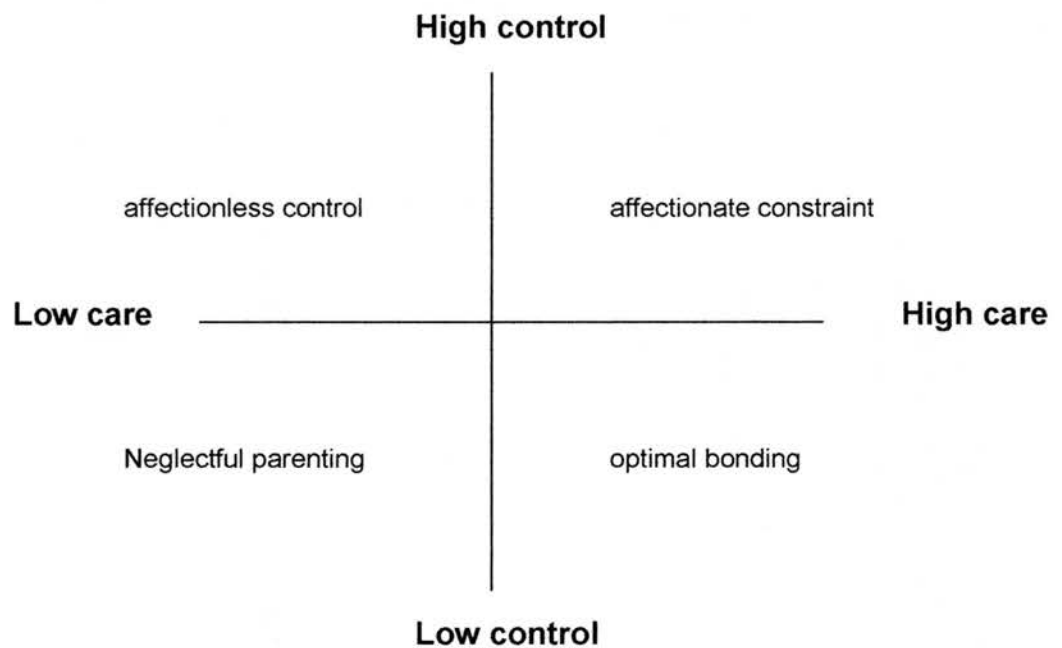
parents. As Rutter maintained above, perceptions of parents have a significant contribution to play in the development of psychological problems, and individuals are more likely to be influenced by the way in which they subjectively viewed their parents rather than the reality of how their parents actually behaved. Further studies using the Parental Bonding Instrument, with groups of twins and siblings, have also suggested that the instrument may actually reflect the reality of parental behaviour (MacCrae and Costa, 1988; MacKinnon, Henderson and Andrews, 1991). Studies using treatment groups and samples from the general population have demonstrated that the Parental Bonding Instrument is psychometrically stable and suggest that it is not influenced by personality traits or current mood states (Parker, 1983, MacKinnon et al, 1989).

The development of the Parental Bonding Instrument was based on previous research, outlined above, which indicates that parents' behaviour and attitudes can be reflected through two principle dimensions. The first, parental care, is a distinct dimension, and the second is not so easy to define but is connected with the concepts of parental control and overprotection. A number of factor analytic studies (Arrindell et al, 1986: Parker, Tupling and Brown, 1979) have confirmed the existence of these parental characteristics. The care scale assesses two poles, one characterised by emotional warmth, empathy, affection and closeness, and the other by coldness and rejection. The protection scale assess two further poles, the first one characterised by control and overprotection and the

second by autonomy and independence. With these dimensions in mind, four main types of bonding can be identified. These are high care-low overprotection (conceptualised as optimal bonding), low care-low overprotection (conceptualised as absent or weak bonding), high-care, high overprotection (conceptualised as affectionate constraint) and low care-high overprotection (conceptualised as affectionless control).

Figure 1

The two scales of the Parental Bonding Instrument, illustrating the four main types of bonding



The results from Parker's studies have shown that depressed adults tend to remember their parents as exhibiting low care and high overprotection, which Parker refers to as 'affectionless control'. Various other studies have

demonstrated a relationship between psychopathology and dimensions on the Parental Bonding Instrument, suggesting a link between care and control and the development of depression, anxiety and other psychopathology in adults (Parker, 1979; Parker, 1981). These studies have measured the effect of parental bonding on mental health in clinic populations of adults.

1.3.4 Parental relationships and psychopathology in adolescents.

Several studies have examined the effects of parental attitudes on adolescents' psychopathology. There is a general indication that the lack of a supportive environment is linked with poorer well-being and dysfunctional adjustment (Rutter, Graham, Chadwick and Yule, 1976). Kashani, Stroeber, Rosenberg and Reid (1988) showed that adolescents with severe psychopathology reported less affection, more abuse and more overprotection compared to well-adjusted adolescents.

Burbach, Kashani and Rosenberg (1989), explored the possible role of early parent-child relations in the psychopathology of depression and suggested that affectionless control (low care and high control) played an important, but not necessarily specific role in adolescent psychopathology. However this study did not differentiate between maternal and paternal bonding styles and the potential contribution of each parent to depressive symptoms in adolescents.

In exploring adolescents' vulnerability to suicidal thoughts, Martin and Waite (1994) reported that adolescents assigning either parent to the affectionless control (low care, high control) quadrant of the Parental Bonding Instrument were at an increased risk of suicidal thoughts, self-harm and depression. Other studies have investigated the role of parental bonding in teenage pregnancy (Cubis, Lewin and Raphael, 1985) drug abuse (Jurich, Polson, Jurich and Bates, 1985) and university adjustment (Graham, 2000). Some studies have found few associations between parental characteristics and psychosocial functioning (Plapp, 1983). Correlations have been found between low parental care and psychological distress in young offenders (Chambers, Power, Loucks and Swanson, 2000). The authors of this study also stressed the importance of considering both parents when using the Parental Bonding Instrument.

Contribution of mothers and fathers

Fathers have often been bypassed in studies of parental relationships, and mothers are reported as being more supportive and more interested in the task of parenting (Coleman and Hendry 1999). However fathers have been shown to be as significant as mothers in the development of psychopathology in children (Phares and Compas, 1992), and an acknowledgement that the impact of fathers and mothers may differ is required to gain a realistic picture of adolescent functioning.

McGarvey, Kryzhanovskaya, Koopman, Waite and Canterbury (2000) investigated the contribution of each parent further in examining the relationships between the bonding style of incarcerated adolescents and feelings of self-esteem, hopelessness, suicidal thoughts and suicide attempts. Significant relationships were found between adolescents' self-esteem, hopelessness and suicidal behaviour, and those individuals who reported a parental bonding style of affectionless control (low care and high control) reported the greatest amount of distress. Adolescents who perceived their parents as having an optimal bonding style (high care, low control) experienced the least amount of stress. Differences between bonding to mother and father were also found. Males, whose mothers had an affectionless control style, reported lower self-esteem and parental bonding style of the father was related to suicidal thoughts and suicide attempts. In both males and females, hopelessness was found to be significantly related to the bonding style of the opposite sex parent.

Studies using normal populations of adolescents.

The above studies have examined the relationship between psychopathology and parental bonding in clinic samples of adolescents and incarcerated youngsters. Less is known about the relationship between parental bonding and distress in normal populations and more specifically in normal adolescent populations.

A large-scale population study (Cubis, Lewin and Dawes, 1989) aimed to assess the factors underlying adolescents' perceptions of their parents and provide normative data on the Parental Bonding Instrument for a community sample of Australian adolescents. The Parental Bonding Instrument was completed by 2,147 individuals with a mean age of 15.4 years. Generally, parents were viewed as 'moderately positive' (Cubis et al 1989, pg 40). Females tended to regard their parents as more caring than males, whilst males saw their fathers as less controlling. Although sex differences were found on some of the psychosocial variables, no significant interactions were found involving the adolescents' sex. The authors concluded that relationships between adolescents' perceptions and other psychosocial characteristics were not sex dependent. Adolescents who perceived their fathers as higher in care seemed to have more positive psychosocial profiles as they were less neurotic, less impulsive, more extroverted, had more positive body images and scored lower on the General Health Questionnaire. Paternal control was related to adolescent impulsiveness. Adolescents who were introverted, more neurotic and had negative body images, tended to perceive their mothers as high in control. Those adolescents who perceived their mothers as lower in care and lower in overprotection were worried and depressed and seemed to have more professional consultations. Overall, adolescents who perceived their fathers as uncaring and their mother as controlling tended to have the least positive psychosocial profiles.

Canetti, Bachar, Galili-Weistubb, De-Nour and Shalev (1997) examined the relationship between parental bonding and mental health in 847 Israeli high school students, with an average age of 16.77 years. There were no significant differences between males and females, besides females reporting more maternal care than males. Mothers were perceived to be more caring and controlling than fathers by both sexes. Adolescents with optimal bonding (high parental care and low parental overprotection) reported more perceived social support, less distress and a higher general wellbeing. This study also showed that a specific configuration of parental bonding, that of affectionless control (low care and high control), was linked with distress and isolation in adolescents. The authors reported that this sample of Israeli adolescents perceived their parents as higher in care and lower in control than Australian adolescents and adults.

Empirical evidence suggests that the Parental Bonding Instrument is culturally sensitive (Parker and Lipscombe, 1979) and the only study using the Parental Bonding Instrument with Scottish adolescents (Shams and Williams, 1995) failed to consider individuals' separate perceptions of mothers and fathers.

Pedersen (1994) presented a shortened 20-item version of the Parental Bonding Instrument and examined the connection between Parental Bonding Instrument scores and anxiety, depression and delinquency in 573 Norwegian adolescents. Psychometric characteristics of this shortened

version were confirmed through factor analysis, discriminating between the two dimensions of the Parental Bonding Instrument. There were no significant differences between males and females in perceptions of the father although females tended to find their mothers more caring. Low care by father was the strongest predictor of anxiety and depression, whilst low maternal care was linked with self-reported delinquency but there were no links with control. Generally the mother was considered to be more caring than the father, which is in line with previous findings which have reported that the mother is considered to be more caring and more controlling than the father (Parker, 1990). These findings also indicated that the mother and father play different roles in relation to several problem areas. These results lend support to the notion that the two Parental Bonding Instrument dimensions can be thought to be non-specific risk factors, as a disturbed relationship with both parents can be related to the development of problems in anxiety, depression and delinquency. This study concluded that the shortened version could be used in research using adolescent samples.

Summary

Attachment theory has outlined the importance of secure attachment between parent and child in the healthy development of the child (Bowlby, 1969). Research has shown that secure attachment to a parent figure is a protective factor against the development of psychological problems (Bretherton and Waters, 1985). Secure attachment enhances a child's sense of mastery and control and leads to the development of self-esteem, positive affect, good peer relationships and a sense of personal autonomy (O' Koon, 1997). The concept of a bond between caregiver and child is thought to be reciprocal, and numerous studies have assessed the impact of parenting style on psychosocial functioning (Baumrind, 1967, Maccoby and Martin, 1983).

The Parental Bonding Instrument (Parker et al 1979), based on the two dimensions of parental care and parental control, has facilitated much research in this area and studies looking at adolescent functioning in relationship to this measure have been reported. An optimal bonding style, which combines care and supports independence, has been associated with positive psychosocial outcomes whilst a combination of low care and high control has been linked to psychopathology and difficulties in adjustment in adolescents. It has also been suggested that there are differences between adolescents' perceptions of their bonding with their mother and father, with mothers being perceived as more caring and controlling (Pedersen 1994).

1.4 Summary, aims and hypotheses.

1.4.1 General summary

- The period of adolescence is a time of transition from childhood to adulthood. It is a period characterised by physical, psychological and social change and individuals adjust to this to varying degrees (Coleman and Hendry, 1999). The development of difficulties and problems can be influenced by a multitude of factors. Theories of adolescence have emphasized the importance of the context of development as well as the role of agency in determining adolescents' adaptation.
- A number of personal traits and characteristics have been found to influence an individual's susceptibility to developing mental health problems (Rolf et al, 1990). This study has chosen three principle factors, self-esteem, locus of control and affect because of their potential importance in adolescence development. In terms of self-concept development, which encompasses self-esteem, adolescence is seen as a time of change and consolidation (Coleman and Hendry, 1999), due to physical changes, intellectual development and increasing emotional independence. The way in which an individual perceives and values themselves has an important effect on their well-being, as research in self-esteem has reported (Rosenberg, 1967). An individual's sense of agency will effect their response in different situations and in a period of developing autonomy and adapting to transitions, perception of control has an important role to play in an adolescent's successful management

of these issues. Positive and negative affect can have implications for behaviour, adaptability and interpersonal relations (Watson and Clark, 1984), and personality factors have a significant contribution to make during a time of progressive changes in the capacity to feel and express the moods of adulthood.

- Research has outlined the important role styles of parenting have on the development of the child (Baumrind, 1991a). The impact of parenting continues past childhood, and individuals and their parents continue to reciprocally influence each other into adolescence (Greenberg et al, 1983). There are a number of different approaches to measuring parenting impact and subjective reports of parental behaviour provide useful indices of individuals experiences of relationships with parents. One such measure, the Parental Bonding Instrument (Parker et al, 1979) with the two dimensions of care and control, has been used in numerous studies and has been shown to discriminate effectively between normal groups and those with different behavioural problems. There has been extensive research into the relationship between depression and deviant scores on the care and control scales of the Parental Bonding Instrument but further research has also indicated that the perception of parents has a role to play in the development of other symptoms. The studies reviewed in section 1.3.4 have demonstrated links between parental bonding and various psychological problems, with high control and low care by one or both parents being associated with greater psychological



distress, whilst optimal bonding (low control and high care) has been associated with more positive adjustment.

- However, as outlined above, there are important moderating factors in the development of problems in adolescence. Although specific populations have been studied, for example the link between perceptions of parents and self-esteem in offenders (McGarvey et al, 2000), previous studies with non-clinic samples relating self-esteem to perceptions of child rearing have been criticised for methodological problems through the use of non-standardised instruments. (Litovsky and Dusek, 1985).
- Although there has been little research on the effects of differences between adolescents' bonding styles with their mother and father (McGarvey et al, 2000), there has been a suggestion that bonding styles with each parent can effect problem development in different areas and adolescents differ in their perceptions of their mother and their father. Previous research has identified permissive parenting as the most common parenting style in a Scottish sample (Shucksmith et al, 1995) but a normative sample of Scottish adolescents using the Parental Bonding Instrument, which examines paternal and maternal styles is not available.
- In the present study the focus is on psychological characteristics of individuals which are important factors in problem development in relation

to the quality of perceived parental relationships. This study aims to use a normative sample of adolescents recruited from a Scottish high school in order to explore the link between adolescents' perceptions of their parents and these various psychological characteristics.

1.4.2 Aims

The aims of this study are to:-

1. Examine the quality of perceived parental relationships in a normative group of Scottish adolescents and compare the results to the results of a large scale study of adolescents' perceptions of parents (Pedersen, 1994).
2. Investigate adolescents' perceptions of maternal and paternal bonding.
3. Examine the association between adolescents' perceptions of parental relationships and self-esteem, positive and negative affect and locus of control.
4. Explore the distribution of the four different parental bonding styles (affectionless control, optimal bonding, weak bonding, affectionate constraint).

5. Explore any differences in self-esteem scores, positive and negative affect scores and locus of control scores across the four parental bonding styles.

1.4.3 Hypotheses

Based on the existing literature, it is hypothesised that

1. Adolescents' perceptions of relationships with the mother and father will be different, with mothers being perceived as more caring and more controlling than fathers.
2. There will be a relationship between adolescents' perceptions of parental bonding and self-esteem with:-
 - i) adolescents' perceptions of high parental care and low parental control being associated with higher self-esteem.
3. There will be a relationship between adolescents' perceptions of parental bonding and affect with:-
 - i) adolescents' perceptions of high parental care and low parental control being associated with lower negative affect and higher positive affect.

4. There will be a relationship between adolescents' perceptions of parental bonding and locus of control with:-
 - i) adolescents' perceptions of high parental care and low parental control being associated with an internal locus of control.

5. There will be a difference in the effect of the different parental styles on self-esteem, positive and negative affect and locus of control scores, with adolescents reporting optimal parental bonding being the most adjusted group, in terms of high self-esteem, high positive affect, low negative affect and an internal locus of control compared to adolescents reporting other styles of parenting.

2. METHOD

2. METHOD

2.1 Design

This correlational study examined the association between the quality of perceived parental relationships and self-esteem, locus of control and affect in a normative group of Scottish adolescents. The study was cross-sectional in design and involved only approaching respondents once, allowing the data to be collected in a relatively short period of time.

2.2 Participants

2.2.1 Selection Criteria

The participant sample was drawn from pupils in S5 attending a secondary school in Perth. The only specific criteria for participants' selection were that they should be aged 16 years and above in order to conform to ethical guidelines. Informed consent to participate in the study was obtained from all participants.

2.2.2 Sample

Questionnaires were distributed to all 199 pupils in S5 and a total of 72 questionnaires were returned (36%). Three of the returned questionnaires had one or more of the questionnaires missing so were discarded from the study. Of the 69 participants remaining, 30 were male and 39 were female. The sample consisted of 35% of S5. The approximate age range was 16 to 17 years of age, with 39% of the sample aged 16 years and 61% aged 17

years. Due to issues of anonymity, required by ethics, date of birth and family circumstances were not permitted to be collected.

As not all the participants in this study were able to identify both a father or a mother figure as being important in their life, there were different numbers of respondents for the four sub-scales on the Parental Bonding Instrument (PBI). Of the 69 respondents, three were unable to complete the scale for a father and reported that they had no paternal influence in their life. Two participants were unable to complete the PBI for a mother figure but did not report a reason. All 69 participants completed the Culture-Free Self-Esteem Inventory, 2nd Ed (CFSEI-2), the Positive and Negative Affect Schedule (PANAS) and the Locus of Control Scale for Children (LCSC).

2.3 Materials

As the focus of this study was adolescents' perceptions of their parents and the relationship with other measures of emotional and psychological well-being, all the measures used were subjective, self-report measures. The use of standardised, valid instruments yields consistent quantitative data not influenced by examiner bias, allowing for easy comparison of scores. The measures used in this study included a measure of the perception of relationship with parents, a measure of self-esteem, a measure of locus of control and a measure of affect.

2.3.1 Measure of the perception of parental relationships.

The shortened version of the Parental Bonding Instrument (PBI) ***(Pedersen 1994)***

In this study the shortened version of The Parental Bonding Instrument (Pedersen, 1994) was employed as the measure of individuals' perceptions of their parents as it allowed respondents to complete the battery of questionnaires in a relatively short period of time. Similar to the original form of The Parental Bonding Instrument (Parker et al, 1979), this is a self-report questionnaire consisting of statements about parental behaviours and attitudes towards the individual. By means of pilot studies looking at how well each item on the original form was understood by adolescents aged 15 to 19 years, Pedersen (1994) selected five Parental Bonding Instrument items measuring 'care' and five measuring 'control'. The short form therefore contains ten of the original 25 items on the long form. The form is completed separately for fathers and mothers (or for a substitute parental figure) and yields four sub-scales, namely paternal control, paternal care, maternal control and maternal care. Pedersen (1994) examined the reliability of these using Cronbach's alpha. The scales have alpha values ranging from 0.69 to 0.78, which is considered acceptable for instruments with only five items. Pedersen (1994) also reported a factor structure similar to that reported by Parker (1983a), confirming a two-factor structure of care and control. The short version of the Parental Bonding Instrument is also able to discriminate between groups and Pedersen (1994) concluded that it could be used in research with adolescents.

Administration and scoring

Respondents completed 4-point Likert scales according to whether they strongly agreed, agreed, disagreed or strongly disagreed with ten statements about their perception of their father and ten statements about their perception of their mother during the first 16 years of their lives. The first five items concerned control and the proceeding five concerned care. The range of scores were 0 to 15 on both the control and care scale. High scores on the control scale suggest parental overprotection and low scores are indicative of parents who encourage independence. High scores on the care scale suggest parents who are warm and understanding and low scores reflect a parent who is cold and rejecting. The questionnaire took approximately five to ten minutes to complete. The instrument is presented in Appendix I.

2.3.2 Measure of self-esteem.

The Culture-Free Self-Esteem Inventory (2nd edition)

(Battle 1992)

The Culture-Free Self-Esteem Inventory (CFSEI-2) is a widely used measure of individual's perceptions of their self-worth, in both research and clinical practice (Battle 1992). The CFSEI-2 for children was only standardised on children up to age 15 and as the individuals in this study were aged 16 and above, the adult form of the CFSEI-2 was used.

Method

As it has been outlined in section 1.2.1. self-esteem comprises a number of features. The adult form is made up of 40 items, incorporating four sub-tests; general self-esteem, social self-esteem, personal self-esteem and a lie sub-test. General self-esteem refers to an individual's overall perception of their worth. Social self-esteem refers to individual's perceptions of the quality of their relationships with peers. Personal self-esteem is a measure of the individual's personal perception of their self-worth.

There is also a lie sub-test which measures defensiveness. The lie sub-test is made up of items related to characteristics which are considered generally valid but socially undesirable.

Sixteen items measure general self-esteem, eight items measure social self-esteem, eight items measure personal self-esteem and eight items are an indication of defensiveness. An overall self-esteem score is obtained by totalling the number of items that indicate high self-esteem, excluding the Lie scale items. The 40 items on Form AD were selected from a pool of 85 items because of their discriminatory qualities. An alpha analysis of internal consistency revealed the following : General, .78; Social, .57; Personal, .72; Lie, .54 (Battle, 1977c). The adult form of the CFSEI-2 has been standardised on adults aged between 16 to 65 and it has been used effectively with senior high school students aged 16 to 18 (Battle, 1980b).

Method

Administration and scoring.

The inventory can be group administered either orally or by instructing individuals to follow the directions on the test form independently. In this study, respondents completed the form individually.

The items in the instrument are divided into those items that measure high self-esteem and those that indicate low self-esteem. Respondents checked either 'yes' or 'no' for each item. Scores for the CFSEI-2 were gained by summing the number of items that indicate high self-esteem, excluding the lie scale items. The total score possible for form AD was 32 and the highest lie score was eight. The total self-esteem score was used in subsequent data analysis. Written administration of the form took between ten and fifteen minutes. A copy of the instrument can be found in Appendix II.

2.3.3 Measure of Affect

The Positive and Negative Affect Schedule (PANAS)

(Watson, Clark and Tellegen, 1988)

The Positive and Negative Affect Schedule was developed as two ten item scales to measure the two independent dimensions of mood, namely positive affect and negative affect. The PANAS was initially designed and validated for use with adult populations. The scales were shown to be highly internally consistent with reliability coefficients (Cronbach's alpha) ranging from .86 to .90 for positive affect and from .84 to .87 for negative

Method

affect (Watson et al, 1988). The correlation between the negative affect scale and the positive affect scale was low, ranging from $-.12$ to $-.23$, which according to Watson et al (1988) was indicative of independence. In developing the scale, Watson et al (1988) obtained ratings for seven different temporal instructions and a significant level of stability for the different time frames was reported. The scale validity was examined by correlating positive and negative affect with sixty mood descriptors (Zevon and Tellegen, 1982) and the scales also correlated with measures of related constructs.

The PANAS has recently been used with an adolescent sports sample (Crocker, 1998) and a version for use with younger children has also been developed (Joiner, Catanzo and Laurent, 1996). Melvin and Molloy (2000), using a sample of 237 Australian adolescents aged between 12 and 18 years, reported internal consistency values and a low correlation between the two dimensions consistent with previous findings. They concluded that the data supported the theoretical and psychometric properties of the PANAS and confirmed its generality across age, making it a suitable instrument for use with adolescent populations.

Administration and Scoring

The schedule consisted of two 10-item scales, which measure positive and negative affect. The PANAS terms were randomly distributed throughout the questionnaire, after Watson et al (1988). Respondents rated, on a 5

point Likert-type scale, the extent to which they experienced each mood state during a defined time frame. The scales were scored by totaling responses to the 10 items that defined each dimension. A copy of the instrument is in Appendix III.

2.3.4 Measure of locus of control.

The Locus of Control Scale for Children (LCSC)

(Norwicki and Strickland, 1973).

This study employed the Locus of Control Scale for Children (Norwicki and Strickland, 1973) as the measure of the extent to which individuals see control of reinforcement as due to external circumstances or under their control. The LCSC is one of the most widely used locus of control scales in younger populations (Furnam and Steele, 1993). It was designed to be a reliable and methodologically accurate measure of generalised locus of reinforcement that could be administered in a group setting to a wide range of children (Norwicki and Strickland, 1973).

The LCSC is a 40-item scale, which provides a single dimensional score of the degree of external and internal locus of control. The 40 items were selected from 102 items from Rotter's (1966) original formulation of locus of control. The development of the scale was based upon a study of 1117 children aged between 9 and 18 years of age.

Method

The scale has been shown to have a modest reliability, with alpha values ranging from .62 to .81 (Furnham and Steele, 1993). There is also no evidence of an effect of intelligence or social desirability on responses on the scale, although scores are related to achievement. Scores have also been shown to be associated to the ability to delay gratification and popularity (Furnham and Steele, 1993), as well as being predictive of aspects of educational achievement (Gammage, 1982).

Administration and Scoring

The LCSC was group administered and took between five and ten minutes to complete. Respondents rated each item on the scale as either 'yes' or 'no'. These were then combined to produce a total score, with a high score being indicative of an external locus of control. The instrument is presented in Appendix IV.

2.4 Procedure

The Director of Education for Perth and Kinross was contacted in December 2000 and permission was granted to approach secondary schools in the area to seek their cooperation in the research. The study was also submitted to Tayside Committee of Medical Research Ethics in December 2000 and approved in February 2001. Minor changes were requested in that no identifying features of respondents were to be recorded, including date of birth and family circumstances. No changes were made to the research design.

Method

Between March and April 2001, the rectors of three secondary schools in Perth were approached in order to seek permission for their pupils to participate in the study. One school responded quickly and declined to take part in the study as they had taken part in a number of surveys that year. The second school deliberated for a few weeks and then declined to take part. This school was uneasy about the inclusion of the Parental Bonding Instrument and expressed concern about possible parental complaints. The rector of the third school agreed to participate in the study in May 2001.

A meeting was arranged with the deputy rector to explain the purpose of the study and the procedure for distributing the questionnaires. Due to exam time tabling, information regarding the study (Appendix V), consent forms (Appendix VI) and the questionnaires were distributed by the deputy rector and another senior member of staff to S5 students, aged 16 and over, during their study periods. Informed consent was obtained from each individual and participation was entirely voluntary with individuals being free to withdraw from the study. Anonymity and confidentiality were guaranteed, as the information was coded by means of a number assigned to each participant. The self-report questionnaires took a total of 30 to 40 minutes to complete. The researcher collected the questionnaires from the school and an agreement was made to provide a seminar on the relevance of the research at a later date.

2.5 Data analysis

The data was analysed using the Statistical Package for Social Sciences (SPSS) for Windows, Version 9. Participants in the study were either aged 16 or 17 years and as date of birth was not permitted to be collected, this was only age in full years. Therefore age was not considered to be a confounding variable in the study and no analysis was carried out on this information. No other demographic variables, other than sex, were permitted to be collected.

The data was checked for errors prior to analysis and exploratory data analysis was carried out to examine the level of normality. Correlational coefficients were calculated in order to examine links between the paternal and maternal sub-scales on the PBI and to examine any associations between the sub-scales on the PBI and the other measures used in this study. One-way analysis of variance was carried out to examine any effects of parental bonding styles on self-esteem, positive and negative affect and locus of control.

As the primary hypothesis was investigating links between the various measures, power was calculated for correlational analysis. Using Cohen's (1992) classification of effect sizes and Clark-Carter's (1999) power tables, in order to gain a medium effect size ($r = 0.3$), with a one-tailed test, a significance level of .05 and power of 0.8, then a sample size of 70 was required.

3. RESULTS

3. RESULTS

3.1 Exploratory data analysis

Tests of normality

Exploratory data analysis was conducted to gain a greater understanding of the data as a whole. After frequency histograms (Appendix VII) had revealed skewed distributions for a few of the variables, tests of normality (Kolmogorov-Smirnov) were conducted in order to further assess the normality of the distribution of scores. Table 1 illustrates the mean, median, standard deviation and test of normality for all participants across all the measures.

Results

Table 1

Means, Medians, Standard Deviations and Tests of Normality for all participants, across all measures¹

Measure	Mean	Median	SD	Test of Normality Kolmogorov- Smirnov		
				Statistic	DF	Sig
PBI Paternal Control	4.41	4	2.97	.179	66	.000*
PBI Paternal Care	8.36	9	3.64	.142	66	.002*
PBI MaternalControl	4.84	5	2.19	.142	67	.002*
PBI Maternal Care	10.94	11	2.67	.115	67	.028*
CFSEI-2 Total	22.39	23	6.80	.100	69	.083
PANAS Positive Affect	32.06	32	8.02	.109	69	.041*
PANAS Negative Affect	19.07	18	6.23	.124	69	.010*
LCSC	15.43	16	4.89	0.73	69	.200

¹ PBI – Parental Bonding Instrument
 CFSEI-2 – Culture-Free Self-Esteem Inventory, (2nd Ed)
 PANAS – Positive and Negative Affect Schedule
 LCSC – Locus of Control Scale for Children

* significant at the 0.05 level

Results

A significant result on the Kolmogorov-Smirnov statistic indicates a violation of the assumption of normality. Table 1 shows a significant result was obtained for all four sub-scales on the PBI (paternal control, paternal care, maternal control, maternal care) and for the positive and negative affect scales on the PANAS. With the above variables showing a deviation from normality and thus violating an assumption underlying the use of parametric tests, the majority of analysis conducted was non-parametric.

3.2 The quality of perceived parental relationships.

3.2.1 The Parental Bonding Instrument (PBI) compared to Pedersen's (1994) Study.

As Pedersen (1994) developed and used the shortened form of the Parental Bonding Instrument, the means from his study were employed as they could provide a comparison to the present study, in order to investigate any differences between Scottish adolescents and Norwegian adolescents. Although ideally a non-parametric test should have been employed, as it was not possible to gain access to the original data set from Pedersen's study, a parametric comparison was made.

The mean scores on the four PBI subscales, paternal care, paternal control, maternal care and maternal control for the adolescents in this study and the sample of Norwegian adolescents are illustrated in Table 2. One-sample t tests were used to compare the scores of the adolescents in this study to the scores of the adolescents in the Pedersen (1994) study.

Results

In this study, adolescents, both male and female, perceived their fathers to be significantly less caring than the adolescents in the Norwegian sample. Males perceived their mothers to be less caring. With regard to control, males in this study reported less paternal control than males in Pedersen's sample. However, there were no differences for females on the control scale for either parent.

Table 2

Means (Standard Deviations) for the PBI for adolescents in this study (males = 29, females = 35) compared to means for Norwegian adolescents in Pedersen's (1994) study (male = 267, female = 306).

PBI variable	This study		Pederson (1994)		t	DF	p
	Means	(S.D.)	Means	(S.D.)			
Male							
Paternal care	8.47	(2.89)	10.1	(3.1)	2.71	294	0.0072*
Paternal control	3.67	(2.56)	4.8	(2.1)	2.69	294	0.0075*
Maternal care	10.0	(2.17)	11.4	(2.6)	2.79	294	0.0055*
Maternal control	5.17	(2.02)	5.6	(3.2)	0.71	294	0.48
Female							
Paternal care	8.28	(4.21)	9.8	(3.4)	2.44	339	0.0152*
Paternal control	5.03	(3.15)	4.7	(2.9)	0.63	339	0.53
Maternal care	11.66	(2.82)	11.9	(2.6)	0.53	339	0.61
Maternal control	4.58	(2.37)	4.9	(3.0)	0.61	339	0.54

*significant at the 0.05 level

3.2.2 Gender differences in adolescents' perceptions of parents.

Mann-Whitney U tests were used to investigate any differences in male and females' perceptions of their parents in this study (Table 3). As in the Pedersen (1994) study, there were no significant differences between the sexes in their perception of their father. However females perceived their mothers to be more caring ($U = 340$, $DF = 65$, $z = -2.69$, $p = .007$). No differences were found on the maternal control scale. As there were few significant differences between male and females' perceptions of their parents, all subsequent analysis involved the data for the sample as a whole.

Table 3

Mann-Whitney U Test for differences between male and female's perceptions of parents on the PBI.

Measure		Mean Rank	U	DF	Z	Significance
PBIpcontrol	Male	28.85				
	Female	37.38	400.5	64	-1.817	.069
PBIpcare	Male	33.27				
	Female	33.69	533.0	64	-.091	.928
PBI mcontrol	Male	37.60				
	Female	31.25	446.5	65	-1.342	.179
PBI mcare	Male	26.72				
	Female	39.55	340.0	65	-2.692	.007*

* significant at the 0.05 level

PBI – Parental Bonding Instrument

pcontrol = paternal control, pcare = paternal care

mcontrol = maternal control, mcare = maternal care

3.3 Adolescents' perceptions of maternal and paternal bonding.

Spearman's Rho correlational coefficients were calculated to examine links between paternal and maternal sub-scales on the PBI. The upper part of Table 5 contains these correlations. Cohen's (1988) guidelines were used to define the strength of the correlation with $\rho = .10$ to $.29$ or $-.10$ to $-.29$ being small, $\rho = .30$ to $.49$ or $-.30$ to $-.49$ being medium and $\rho = .50$ to 1.0 or $-.50$ to -1.0 being large.

A significant, medium, negative correlation was found between paternal care and paternal control ($\rho = -.43$, $p = .000$, two-tailed) and maternal care and control ($\rho = -.39$, $p = .001$, two-tailed). This correlation is similar to that reported in other studies (Parker et al, 1979), demonstrating that high control/overprotection is associated with low care. There was also a significant medium positive correlation between paternal control and maternal control ($\rho = .39$, $p = .002$, two-tailed) which indicates a consistency of parenting styles on the control dimension. No significant relationship was found between paternal and maternal care, which suggests an inconsistency between maternal and paternal bonding styles on the care scale. There was a significant negative relationship between maternal control and paternal care ($\rho = -.32$, $p = .010$, two-tailed), although maternal care and paternal control were not significantly associated. This suggests that high control by the mother is associated with low care by the father, but low care by the mother is not associated

Results

with high control by the father. The above significant associations are illustrated in scatter diagrams in Appendix VIII.

3.3.1 Hypothesis 1

Hypothesis 1 predicted that participants' perceptions of relationships with their mother and their father would be different, with mothers being perceived as more caring and more controlling.

A Wilcoxon Test (Table 4) showed that participants perceived their mothers as significantly more caring ($z = -4.29$, $DF = 63$, $p = .000$, one-tailed) and more controlling ($z = -1.88$, $DF = 63$, $p = .030$, one-tailed) than their fathers and therefore hypothesis 1 was upheld.

Results

Table 4

Wilcoxon Signed Ranks Test for differences between participants' perceptions of maternal and paternal bonding.

Measure	n	Mean Rank	Z	Significance
PBI_mcontrol – PBI_pcontrol				
Negative ranks mcontrol < pcontrol	17	29.68		
Positive ranks mcontrol > pcontrol	36	25.74	-1.884	.060
Ties mcontrol = pcontrol	11			
PBI_mcare – PBI_pcare				
Negative Ranks mcare < pcare	13	19.00		
Positive ranks mcare > pcare	41	30.20	-4.286	.000*
Ties mcare = pcare	10			

* Significant at the 0.05 level (two-tailed).

PBI – Parental Bonding Instrument

pcontrol = paternal control, pcare = paternal care

mcontrol = maternal control, mcare = maternal care

3.4 Adolescents' perceptions of parental relationships and self-esteem, positive and negative affect and locus of control

Spearman Rho correlation coefficients were calculated to examine the links between participants' scores on the four PBI scales and their scores on the CFSEI-2, the PANAS and the LCSC. Table 5 contains the correlations between all these measures. As definite directional predictions in the hypotheses were made, a one-tailed probability was used.

3.4.1 Hypothesis 2

Hypothesis 2 predicted a relationship between adolescents' perceptions of parental relationships and self-esteem, with perceptions of high parental care and low parental control being associated with high self-esteem.

As can be seen from Table 5, a small but significant negative correlation was found between paternal control scores ($\rho = -.24$, $p = .028$) and maternal control scores ($\rho = -.25$, $p = .020$), and scores on the CFSEI – 2. This suggests that higher control by parents was linked to lower self-esteem. There were no significant correlations for the PBI care scores and CFSEI-2 scores. Hypothesis 2 was only partially upheld as significant relationships were found between parental control and self-esteem but not between parental care and self-esteem.

3.4.2 Hypothesis 3

Hypothesis 3 predicted a relationship between adolescents' perceptions of parental relationships and affect, with perceptions of high parental care and low parental control being associated with high positive affect and low negative affect.

A weak but significant negative correlation was found between paternal control and positive affect ($\rho = -.25, p = .021$), and maternal control and positive affect ($\rho = -.25, p = .020$). Maternal care was positively correlated with positive affect ($\rho = .38, p = .001$), but there was no significant correlation between paternal care and positive affect. This implies that positive affect was associated with lower levels of parental control and higher levels of maternal care. No significant associations were detected between negative affect and any of the parental sub-scales.

Hypothesis 3 was thus not fully supported as significant relationships were found between parental control, maternal care and positive affect, but no significant relationships were discovered between parental control and care and negative affect.

3.4.3 Hypothesis 4

Hypothesis 4 predicted a relationship between adolescents' perceptions of parental relationships and locus of control, with perceptions of high parental

Results

care and low parental control being associated with an internal locus of control.

Paternal and maternal control were found to be significantly and positively correlated with the locus of control measure ($\rho = .27$, $p = .016$ and $\rho = .25$, $p = .021$ respectively) suggesting that higher parental control was linked with a more external locus of control. A small but significant negative relationship was also found between paternal care and locus of control ($\rho = -.22$, $p = .040$), indicating that higher paternal care was associated with a more internal locus of control.

Therefore hypothesis 4 was upheld as significant relationships were found between paternal and maternal control and locus of control as well as between paternal care and locus of control.

The above significant associations are illustrated in scatter diagrams in Appendix IX. The proportions of variance accounted for by each of the statistically significant correlations are illustrated in Appendix X.

Table 5

Spearman Rho Correlational matrix for the PBI and other measures used in the study.

Measure	PBIpcontrol	PBIpcare	PBIImcontrol	PBIImcare	CFSEI-2	PANAS - pa	PANAS - na	LCSC
PBIpcontrol	1.00							
PBIpcare	-.43**	1.00						
PBIImcontrol	.39**	-.32*	1.00					
PBIImcare	-.08	.24*	-.39**	1.00				
CFSEI-2	-.24*	.12	-.25*	.16	1.00			
PANAS - pa	-.25*	.17	-.25*	.38**	.43**	1.00		
PANAS - na	.08	-.15	.11	-.06	-.39**	-.24*	1.00	
LCSC	.27*	-.22*	.25*	-.20	-.69**	-.33**	.37**	1.00

** Correlation is significant at the 0.01 level (one-tailed)

* Correlation is significant at the 0.05 level (one-tailed)

PBI – Parental Bonding Instrument

pcontrol = paternal control, pcare = paternal care

mcontrol = maternal control, mcare = maternal care

CFSEI-2 – Culture-Free Self-Esteem Inventory, (2nd Ed)

PANAS – Positive and Negative Affect Schedule

LCSC – Locus of Control Scale for Children

3.5 Parental bonding styles

3.5.1 Distribution of maternal and paternal bonding styles

As one of the aims of the study was to explore the distribution of parental bonding styles, it is possible to define the four groups of parental bonding style by intersecting the care and control scales on the PBI at their means, using normative data (Parker et al 1979, 1983). Parker (1979) provided norms for the PBI for adults and Cubis et al (1989) produced norms for adolescents. However as these studies used the long form of the Parental Bonding Instrument, it was considered more appropriate in this case to use Pedersen's (1994) norms as this study used the same shortened form of the Parental Bonding Instrument.

Table 6 shows the distribution of maternal and paternal bonding style among this sample of adolescents. As can be seen from this table, 73% of the sample reported other than optimal bonding with their mother and 62% reported other than optimal bonding for their father

Table 6

Distribution of adolescents' reported bonding style with father and mother on the PBI.²

Parental Bonding Style	Paternal		Maternal	
	n	%	n	%
Affectionate Constraint (high control, high care)	7	10.6	12	17.9
Optimal Bonding (low control, high care)	25	37.9	18	29.9
Weak Bonding (low control, low care)	15	22.7	12	17.9
Affectionless control (high control, low care)	19	28.8	25	37.3

² The parental styles were defined, using Pedersen's (1994) means, as follows:
 paternal control 1- 4 = low 5-15 = high
 paternal care 1- 9 = low 10-15 = high
 maternal control 1- 4 = low 5-15 = high
 maternal care 1-11 =low 12-15 = high

3.5.2 Hypothesis 5

Hypothesis 5 predicted that there would be a difference in the effect of the different parental styles on self-esteem, positive and negative affect and locus of control scores, with adolescents reporting optimal parental bonding being the most adjusted group.

Since the number of participants were unevenly distributed amongst the four parental bonding styles (affectionate constraint, optimal bonding, weak bonding and affectionless control), thus making the sample size in some of the groups small, a Kruskal-Wallis one way analysis of variance was performed on the four parental styles to examine any differences in self-esteem scores, positive and negative affect scores and locus of control scores.

Paternal Bonding Style

Table 7 illustrates the medians and results from Kruskal-Wallis one way ANOVAs on self-esteem scores, positive and negative affect scores and locus of control scores across the four paternal bonding styles.

Self-Esteem

As shown in Table 7, the results gave an H value of 1.03, 3 DF, with an associated probability value of .794, thus concluding there were no significant differences in total self-esteem scores across the four paternal bonding styles.

Results

Positive Affect

There were significant group differences on this measure with an H value of 8.15, 3 DF and an associated probability level of .043. As there are no post hoc tests which follow from a Kruskal-Wallis, in order to identify where any differences lie, pairwise comparisons were made using Mann-Whitney tests (Table 8). Three comparisons were made, between optimal bonding and the three other parental styles. Due to the effects of multiple comparisons, p was set at < 0.016 and no significant effects were found, therefore it was not possible to define where the differences lay.

Negative Affect

No significant differences were found across the four paternal bonding styles for negative affect ($H = 1.29$, $DF = 3$, $p = .75$)

Locus of Control

No significant differences were found for locus of control scores by paternal bonding style ($H = 4.34$, $DF = 3$ and $p = .230$).

Table 7

Kruskal-Wallis One Way ANOVAs for differences between self-esteem, positive and negative affect and locus of control by paternal bonding style.

Paternal Bonding Style					H	DF	p
Measure	Affectionate Constraint	Optimal	Weak	Affectionless Control			
	Median						
CFSEI-II	22	23	24	20	1.03	3	.794
PANAS-pa	28	35	31	31	8.15	3	.043
PANAS-na	18	17	18	19	1.29	3	.751
LCSC	15	15	16	18	4.34	3	.230

PBI – Parental Bonding Instrument
CFSEI-II – Culture Free Self-Esteem Inventory, (2nd Ed)
PANAS – Positive and Negative Affect Schedule pa –positive affect, na-negative affect
LCSC – Locus of Control Scale for Children

Table 8

Mann-Whitney U Tests for differences between parental bonding styles on
PANAS – positive affect scores

Parental Bonding Style	Mean Rank	U	Z	Significance
Optimal Bonding	18.36			
Affectionate Constraint	9.86	41.0	-2.129	.03
Optimal Bonding	22.74			
Weak Bonding	16.77	131.5	-1.568	.117
Optimal Bonding	26.46			
Affectionless Control	17.29	138.5	-2.352	.019

Results

Maternal Bonding Style

The medians and results from Kruskal-Wallis one way ANOVAs on self-esteem scores, positive and negative affect scores and locus of control scores by maternal bonding styles are illustrated in Table 9 below.

Self-Esteem

As shown in Table 9, maternal bonding style had no significant effect on total self-esteem scores, ($H = 1.76$, $DF = 3$, $p = .624$).

Positive Affect

No significant differences were found across the four maternal bonding styles for positive affect ($H = 6.36$, $DF = 3$, $p = .095$).

Negative Affect

There were no significant differences on this measure by maternal style ($H = 1.94$, $DF = 3$, $p = .586$).

Locus of Control

There were also no significant differences across the four maternal bonding styles for locus of control scores ($H = 4.34$, $DF = 3$, $p = .540$).

Table 9

Kruskal-Wallis One Way ANOVAs for differences between self-esteem, positive and negative affect and locus of control by maternal bonding style.

Maternal Bonding Style					H	DF	p
Measure	Affectionate Constraint	Optimal	Weak	Affectionless Control			
CFSEI-II	21	23.5	26	23	1.76	3	.624
PANAS pa	33.5	34.5	33	31	6.36	3	.095
PANAS na	19	17	19.5	19	1.94	3	.586
LCSC	15	15	15.5	17	2.16	3	.540

PBI – Parental Bonding Instrument
CFSEI-2 – Culture Free Self-Esteem Inventory, (2nd Ed)
PANAS – Positive and Negative Affect Schedule pa –positive affect, na-negative affect
LCSC – Locus of Control Scale for Children

Paternal style had no effect on self-esteem, locus of control and negative effect, but did have an effect on positive affect, although it was not possible to locate where the difference lay. Maternal bonding style had no effect on any of the measures. Hypothesis 5 was therefore not supported.

4. DISCUSSION

4. DISCUSSION

The study was based on the premise that parenting styles, as measured by perceptions of parental relationships, have an impact on individuals' psychological characteristics. Self-esteem, affect and locus of control are all relevant characteristics that influence problem development during the adolescent period. The study examined adolescents' (aged 16-17 years) perceptions of parental relationships, as measured by the shortened form of the Parental Bonding Instrument. It aimed to compare the results with the results of a study of Norwegian adolescents (Pedersen 1994), investigate any differences between paternal and maternal bonding, look at the association between parental relationships and self-esteem, positive and negative affect and locus of control. It also explored the distribution of parental bonding styles and any differences these styles may have on the above measures.

4.1 Summary of Results

The main findings were as follows:-

1. Significant differences were found between the adolescents in this study and the Norwegian adolescents in Pedersen's (1994) study. Males in this study reported lower levels of care for both parents and lower levels of paternal control than the Norwegian sample. Females in this study reported lower levels of care for father compared to the Norwegian sample.

Discussion

2. Females perceived their mothers to be more caring but no significant differences were reported between the sexes in the perception of fathers.
3. Paternal care and control were negatively correlated, as were maternal care and control. A significant positive correlation was found between paternal control and maternal control.
4. A significant difference was found between participants' perceptions of mothers and fathers. Mothers were perceived as more caring and more controlling than fathers.
5. Self-esteem was negatively correlated with paternal and maternal control.
6. Positive affect was negatively correlated with paternal and maternal control and positively correlated with maternal care.
7. Locus of control was positively correlated with paternal and maternal control and negatively correlated with paternal care.
8. With regard to parental bonding styles, 29% of participants reported optimal bonding for their mother and 37% of participants reported optimal bonding for their father.

9. Paternal bonding style had an effect on positive affect but not on self-esteem, negative affect or locus of control scores. Maternal bonding style had no effect on any of the measures.

4.2 Discussion of Results

Aim 1 – To examine the quality of perceived parental relationships in a normative group of Scottish adolescents and compare to a large-scale study of Norwegian adolescents' perceptions of parents.

Compared to the sample of Norwegian adolescents in Pedersen's (1994) study, adolescents in this study perceived their parents to be less caring. Males in the study perceived their fathers to be less controlling than Pedersen's sample but females reported no difference in control levels from the Norwegian sample.

A number of studies have suggested that the PBI is culturally sensitive which may account for some of the differences. Parker and Lipscombe (1979) compared children of Jewish and Greek immigrants living in Australia with Australian children. They found that Greek children considered their parents to be more controlling than Australian controls, whilst Jewish children perceived their mothers as less caring. Israeli adolescents (Canetti et al 1997) reported more care and less control from both parents compared to a sample of Australian adolescents (Cubis et al 1989). Shams and Williams (1995) examined differences in parental perceptions of adolescents from an Asian and non-Asian background in

Glasgow and found British Asian adolescents perceived more parental control than non-Asian adolescents. Shuksmith et al (1995) reported the most common style of parenting for Scottish adolescents was permissive, which is associated with low levels of control. Certainly in this study, lower levels of control were reported by males for their fathers than in the Norwegian sample and lower levels of care for both male and female were reported. This would seem to indicate that there are some differences in PBI scores when using participants from different cultural backgrounds.

Gender differences in adolescents' perceptions of parents.

Female participants perceived their mothers to be more caring but there were no significant differences between the sexes in the perception of fathers. This was similar to the findings reported by Pedersen (1994), who found no significant differences between sexes in the perception of fathers and found that females perceived their mothers to be more caring and less controlling than males did. However sex differences were not a focus of this study and were not explored in any depth, other than to ascertain whether to treat the sample as a whole, or as male and female. The sample was examined as a whole as sex differences on the other psychological measures was beyond the scope of this study.

Aim 2 – To investigate adolescents' perceptions of maternal and paternal bonding.

A negative correlation was found between both the paternal and maternal care and control scales. This was a replication of results reported in other studies (Parker et al 1979, Burbach et al 1989) and is an indication that high parental control/overprotection is associated with lower levels of parental care. Paternal control and maternal control were correlated, as reported in Pedersen's (1994) study. Paternal care and maternal care were not correlated. This is contrary to Pedersen's (1994) results and suggests a degree of inconsistency in parenting styles on the care scale in this study.

Hypothesis 1

Hypothesis 1 predicted a difference between perceptions of the mother and the father in that the mother would be perceived as more caring and more controlling. A significant difference was found and participants reported their mothers as more caring and more controlling than fathers, therefore supporting hypothesis 1.

The present study confirms findings of previous studies with adults (Parker, 1983a, 1990), with normative groups of adolescents (Canetti et al, 1997, Cubis et al, 1989) and incarcerated adolescents (Chambers et al, 2000), who all report that mothers are perceived as more caring and more

controlling. This suggests that universally, mothers are regarded as more caring but more restrictive than fathers.

It would seem that the father's characteristics are as important as the mother's characteristics in adolescent development, which Chambers et al (2000) report in their study of delinquent adolescents as a stronger association was found between low paternal care and psychological distress than maternal care. However the role of the mother and father in adolescence may be different. In looking at communication between adolescents and their parents, mothers appeared to be more in touch with their teenagers, engaging in their interests and serving as confidantes (Youniss and Smollar, 1985), as well as sharing a greater degree of intimacy (LeCroy, 1988). Hauser et al (1987) looked closely at the differing roles played by mothers and fathers, and found fathers expressed more support for adolescents' ideas whilst mothers were more constraining. If mothers continue to exert the same protective behaviours that they do in childhood, then it is likely that this will be viewed as more controlling in adolescence. Other research looking at difference between parents suggests that fathers appear to place more of an emphasis on autonomy, whilst mothers are more nurturing (Rossi 1985). These studies indicate that adolescents do perceive their mothers and fathers as fulfilling different roles which therefore contributes to their differing perceptions.

Aim 3 – To examine the association between adolescents' perceptions of parental relationships and self-esteem, positive and neagtive affect and locus of control.

Hypothesis 2

Hypothesis 2 predicted that high parental care and low parental control would be associated with higher self-esteem. Paternal and maternal control were found to be negatively correlated with total self-esteem scores, suggesting that lower control was linked with higher self-esteem.

Hypothesis 2 also predicted that there would be an association between the care scale and self-esteem. There were no significant correlations between either maternal or paternal care and self-esteem. Hypothesis 2 was therefore only partially supported.

Martin and Waite (1994), in a study of adolescents' perceptions of parental bonding and suicidal thoughts, found adolescents reporting high control were at an increased risk of depression and concluded that this supported the idea that protection (intrusiveness and over control) had powerful effects on self-esteem. Litovsky and Dusek (1985) also reported that high self-esteem was associated with parents who were less psychologically controlling. It may be that perceptions of parental control contribute more to variations in self-esteem than perceptions of care, by encouraging dependency and not allowing the development of autonomy, an important component in self-esteem.

Discussion

In this study, the amount of variance accounted for was small, with 6% of the variance in self-esteem being explained by the variation in maternal and paternal control. This was a slightly lower variance than that reported by Litovsky and Dusek (1985) who reported a variance of 7% for fathers and 12% for mothers, suggesting the perception of mothers was more important than the fathers' with regards to self-concept development. Litovsky and Dusek (1985) did use a younger sample of adolescents (11-14 years) whereas this study used adolescents aged 16 and 17 years. Self-esteem research has suggested that as young people move towards late adolescence and early adulthood, the social environment and the wider peer group become more influential (Harter, 1990, Rosenberg, 1965). Although parents remain influential, it may be that the use of an older sample of adolescents explains this result, as perceptions of parents may not have such an important bearing on perceptions of the self, as they do in younger samples of adolescents.

Hypothesis 3

Hypothesis 3 predicted a relationship between perceptions of parental bonding and affect, with high parental care and low parental control being linked with low negative affect and high positive affect. Maternal care was positively correlated with positive affect, whilst paternal and maternal control were negatively correlated with positive affect. Therefore high levels of maternal care and low levels of parental control were associated with a higher positive affect. However no significant relationships were

Discussion

found between negative affect and parental relationships and as hypothesis 3 predicted an association with both positive and negative affect, the findings only partially support hypothesis 3.

The relationship between positive affect and perceptions of parental bonding were as expected. Positive affect reflects the extent to which individuals feel alert, enthusiastic and active. High positive affect, characterised by energy and concentration, was associated with perceptions of high care from mother. Positive affect is said to correspond roughly to the personality factor of extroversion (Watson and Clark, 1984) and Graham (2000) found university student extroversion was linked with optimal bonding (high care, low control) with the mother. The amount of variance in positive affect accounted for by maternal care was a moderate 14%. This suggests that perceptions of maternal care were more important than paternal care (where there was no significant relationship) and parental control (which accounted for a lower variance) with regards to positive affectivity.

There were no significant relationships between negative affectivity and perceptions of parental bonding. It was expected that low negative affectivity, characterised by a state of calmness, would be associated with higher care and lower control. Negative affectivity has often been described as a disposition towards negative emotionality and encompasses both aspects of anxiety and depression. Although studies looking

specifically at negative affectivity and parental bonding are not available, there is a research documenting low care and high control as characterising depressed adolescents (Burbach et al, 1989, Pedersen, 1994). Negative affectivity corresponds to the personality factor neuroticism (Watson and Clark 1984) and Cubis et al (1985) reported that adolescents who reported their mothers as controlling were more neurotic. However Graham (2000), found no significant relationship between this factor and the care and control scales on the PBI in her study of first year undergraduate students.

Hypothesis 4

Hypothesis 4 predicted an association between perceptions of parental bonding and locus of control with high parental care and low parental control being associated with an internal locus of control. Paternal care was negatively correlated with locus of control and paternal and maternal control were positively correlated with locus of control. This suggested that, as predicted in hypothesis 4, higher levels of paternal (although not maternal) care and lower levels of parental control were associated with a more internal locus of control. Adolescents who perceive their parents as allowing them autonomy had a more internal locus of control and believe they have more control over the outcome of events. This is in keeping with a study by McIntyre and Dusek (1995), who studied parental styles and coping in adolescents, and suggested that the central factor was control.

Adolescents' perceptions of their parents as warm and encouraging influenced control beliefs and promoted a sense of competence.

Aim 4 – To explore the distribution of the four different parental bonding styles.

A further aim of the study was to explore the distribution of the four different parental bonding styles, identified by Parker et al (1979) during the development of the PBI. The four main types of bonding are affectionate constraint (high care, high control); optimal (high care, low control); weak (low care, low control) and affectionless control (low care, high control). When the data was considered using the means from Pedersen's (1994) study of Norwegian adolescents, the highest percentage of adolescents reported optimal bonding (low control, high care) for their fathers (37.9%) and affectionless control (high control, low care) for their mothers (37.3%). Slightly more subjects reported affectionate constraint with their mother and a little more reported weak bonding with their father. Other studies with adolescents have found optimal bonding to be the most reported bonding style (Canetti et al ,1997). Graham (2000), looking at first year undergraduate students, used Pedersen's (1994) means to define the four parental bonding styles and found that the highest percentage of adolescents perceived their mothers as optimally bonded (32.2%) and their father as affectionately constrained (31.4%). No hypotheses were predicted for the distribution of parental bonding styles as there were no studies with a normative sample of Scottish adolescents, using the PBI and

looking at both maternal and paternal bonding. However Shucksmith et al (1995) found that a permissive parental bonding style characterised the Scottish sample of young people in middle adolescence. Shucksmith et al (1985) used Baumrind's (1967) definitions of parenting styles which suggest that permissive parents have a laissez faire attitude towards their child and let them do whatever they want. Parker et al (1979) defined optimal bonding as a combination of low control and high care. Pedersen (1994) also recognised this discrepancy, and reported that the concept of control on the PBI had more negative connotations than in Baumrind's works. Parker regards low control as encouraging autonomy whereas Baumrind argues for a clear structure of rules to guide the individual, epitomised in the authoritative parenting style. There does not seem to be the equivalent style in the PBI. As the study has not employed the same measures as Shucksmith et al (1995), it is unable to make a direct comparison but arguments have been outlined elsewhere (Biggam and Power 1998), that optimal parenting, by allowing the child too much autonomy, could be regarded as permissive. However more adolescents rated their mothers as affectionlessly controlled, which is different from previous studies with adolescents. It could be that this older group of adolescents, as they move towards adulthood, perceive the controls imposed by mothers as restricting, whereas younger adolescents may well differ in this perception.

Aim 5 -To explore any differences in self-esteem , positive and negative affect and locus of control across the four parental bonding styles.

Hypothesis 5

Hypothesis 5 predicted that there would be an effect of the different parental styles on self-esteem, affect and locus of control, with adolescents reporting optimal bonding being the most adjusted group. Paternal bonding style was shown to have an effect on positive affect but not on self-esteem scores, negative affect scores and locus of control scores. However it was not possible to define where this difference lay. Maternal bonding style had no effect on any of the measures of psychological characteristics. This was not as expected so hypothesis 5 was not supported. Possible explanations for this are provided below.

4.3 Methodological issues and limitations

There are a number of limitations to the study which mean the findings should be treated with caution. The shortcomings, due to methodological problems and limitations are outlined in this section.

4.3.1 Data collection

As the study was constrained by time, the method of collecting data was not ideal. As it was exam time, questionnaires were distributed to participants during their study periods, by teachers. Ideally, the author

would have distributed and collected the questionnaires during a time-tabled lesson and therefore gained a higher response rate. However it could be argued that this method would have reflected a more compulsory nature of data collection and may not have produced the high quality of data gained through the more voluntary strategy. Even though the response rate was lower than would have been expected if the data was collected in the above way, the quality of the data collected was high as very few questionnaires had to be discarded from the study.

4.3.2 Sample Size

The sample size was relatively small and although power analysis calculated prior to the study, for the main hypotheses, predicted a medium effect for a correlational design, in order to achieve the same power for non-parametric correlational analysis, then the sample size has to be multiplied by 1.1. (Clark-Carter, 1999). This would mean 77 participants would have been the ideal number.

4.3.3 Analysis of data

The use of non-parametric tests reduces the statistical power and increases the likelihood of a type II error. However it was felt that the data was more honestly represented by non-parametric tests given the non-normal distribution across most of the variables. Although data analysis has been cautious, it was not possible to explore the associations further, through multiple regression techniques, due to the skewed data.

4.3.4 Lack of demographic details

Although the purpose of the study was to look specifically at factors considered to be important in adolescent development, the lack of demographic details allowed to be collected due to ethical constraints, such as family circumstances and dates of birth, limited the scope of the study. However research has suggested that the way in which parents behave towards their children is largely independent of any effects of family composition (Shucksmith et al 1995, Steinberg 1990).

4.3.5 Cross-sectional design

The study was cross-sectional in design and therefore causality cannot be assumed from the results. Although it is possible to gauge from past research in attachment theory and parenting styles, that a secure attachment and a caring warm environment fosters the development of a positive self-concept, an internal locus of control and positive affect, it is also possible that individuals with low self-esteem or a certain type of temperament socialise their parents to behave towards them in a particular way. It may also be the case that there is a reciprocal causal relationship, which is the central theme of the theory of developmental contextualism, outlined in section 1.1.1. Through the interactions an individual has with his/her parents, the individual influences the parents who are influencing him/her. It is therefore not possible to make any conclusions about the direction of the relationship between adolescents' perceptions of parental

bonding and self-esteem, positive affect and locus of control. A longitudinal study would be required to establish this direction.

4.4 Alternative explanations for the results

In the present study, although adolescents' perceptions of their parents were linked to self-esteem, positive affect and locus of control, the associations found were mostly small. There are several possible explanations for this finding.

4.4.1 Distortion of perceptions

It is possible that low self-esteem or an external locus of control distorts the perceptions that adolescents hold of their parents, and may not be reflective of any constant aspect of their relationship with their parents. Although previous studies using the PBI seem to indicate that responses are not influenced by personality and mood (Parker 1983a), Pedersen (1994) reports two studies that are in contrast to Parker's findings. These studies, (Lewinsohn and Rosenbaum 1987 and Gerlsma, Arrindell and Emmelkamp, 1991) indicate that mood is an important variable when answering self-report questionnaires and as Pedersen (1994) advocates, it is therefore still necessary to question these influences on PBI scores.

4.4.2 Subjective experiences

Although the PBI has been used with samples of adolescents, it was originally designed for use with adults as a retrospective analysis of

parenting relationships. Although demographic information detailing home circumstances was not collected, it was assumed that the majority of adolescents in this study, as they were still attending school, would be living at home with parents. It could be that this affected the data, especially if there are problems in the parent/child relationship. As Cubis et al (1989) suggests, it may be that adolescents' perceptions are state dependent and reflective of immediate relationships with parents rather than enduring parental behaviour.

Parker has tried to validate the PBI by looking at independent support from other sources, for example in twin and sibling studies. The stability of the PBI with adult samples has been shown to be good. (Parker et al 1979). Shucksmith et al (1995) has reported that young people's perceptions of their relationships with their parents do correspond to theoretical models of parenting. The point of self-report measures are that they measure subjective experiences. Schaefer (1965), as reported in Litovsky and Dusek (1985) has argued that the critical features in parental child-rearing techniques may be better indexed by measures of the adolescent's interpretation of the behaviour. Lambourn et al (1991) argued that subjective assessments provide important information on the adolescent's experience in the family and do correspond to objective measures. The PBI has also been used with other samples of adolescents, with a range of ages (Canetti et al 1997, Cubis et al 1989, Pedersen, 1994). It is through

longitudinal studies carried out during early adulthood that PBI measures from adolescence can be evaluated for stability.

4.4.3 Influence of additional factors

Although the amount of variance explained by perceptions of parental relationships, for example with self-esteem, is similar to that reported in other studies, it is important to consider the unexplained variance. The existence of other factors may be underlying the association between two variables. The study of factors contributing to problem development is a huge area. Research has demonstrated that other factors such as social support, family conditions, parental mental health, as well as personal factors such as genetic vulnerabilities, illness and intelligence can all influence parental behaviour, which in turn influences the behaviour of the child.

4.5 Implications and future directions

Adolescence has been described as the phase in life between childhood and adulthood and can be understood as a time of interactions between biological, psychological and social factors. Development occurs in the context of a systemic interaction with parents, peers, school and society as a whole. Adolescence is characterised by change but it need not be problematic if certain conditions prevail. The main goal of studies using a general population sample is in the identification of risk factors and protective factors to aid in the prevention of the development of

psychological problems. This study has taken a snapshot of one period of adolescence and looked at parental bonding and the association with various factors which influence development. This section aims to outline any implications these findings may have and point towards future research in the area.

4.5.1 Prevention and early intervention

Attachment theory has outlined the importance and long term-consequences of the emotional bond between parent and child. Parents continue to be a source of influence during adolescence. Evidence discussed in the first chapter confirms the generally positive influence parenting styles can have on child and adolescent development, with the authoritative parent influencing their child's feelings of competence, self-esteem, and sociability (Baumrind, 1991a). The uninvolved, permissive or authoritarian parent, can in turn, influence problem development by being unavailable, inconsistent or overcontrolling. Two core components of parenting are care and control and adolescents' perceptions of these two dimensions have provided useful subjective measures of the effects of parenting on development. A combination of high control and low care has generally been linked with adolescent pathology, whilst low control and high care has influenced more positive outcomes in adolescents (Cubis et al, 1989,Petersen, 1994). This study has found a relationship between parental factors and self-esteem, positive affect and locus of control, confirming that young people's perceptions of parents have important

consequences for development, as these factors in turn influence adjustment and coping.

Controlled preventative intervention trials provide evidence that strengthening certain protective factors or processes can reduce the likelihood of negative developmental outcomes among adolescents who are at risk. This has implications for issues of prevention of adolescent problems in the first place. The critical role of early parenting in the evolution of later problems has underlined the need and relevance of parent-training interventions (Herbert 2000). The prevention of problems in adolescence and the subsequent negative path into adult life therefore requires altering parental practices, possible by the use of parent training programmes before the adolescent years. Early intervention programmes and parent training interventions have received considerable empirical support for their effectiveness in treating problems of childhood (Cedar and Levant, 1990, Webster-Stratton, 1991).

However the parenting of teenagers may bring to the fore yet more challenges, such as difficulties in defining roles and responsibilities, a sense of loss of control and conflicts between adolescent and parent, as the young person strives to develop their own identity. Often parents of children reaching adolescence are not seen as a group requiring support (Coleman and Hendry, 1999) and may sometimes be reluctant to acknowledge difficulties, as it may be perceived as failure on their part. It

may be that more information and support needs to be made available to the parents of teenagers. Bogenschneider and Stone (1997) report on an initiative which sent out newsletters to parents throughout the school year. The newsletters covered issues such as adolescent development and were shown to have a positive impact on attitudes and behaviour. Roker and Coleman (1998) reported, in their review of parenting programs for parents of teenagers in the UK, that more programmes are becoming available and there is growing interest amongst parents and professionals to develop and take part in such programmes. Benefits from involvement in the programmes included increased parental confidence and better communication between parent and adolescent. Roker and Coleman (1999) are also developing a whole school approach to parent support which involves offering advice and the opportunity for discussion for parents. These approaches acknowledge the context of adolescent development and the interaction between adolescent and parent.

4.5.2 Clinical practice

In adolescence there is the need to address the perspectives of both the child and the adult, which in turn influences a range of issues for clinical management and treatment. The young person is not only effected by his or her parents but in turn has an effect on his/her parents. As outlined in the theory of developmental contextualism, the adolescent is seen as being acted on and acting upon other members of the family. This has implications for clinical practice and effective interventions for adolescents.

Johnson (1995), suggests that effective treatment for adolescents should take into account the social nature of adolescents and make an effort to restructure networks within the family.

4.5.3 Long term implications of parental bonding.

Research looking at the intergenerational nature of patterns of attachment have linked parent's own accounts of their attachment history with attachment behaviour exhibited by their child. This research has mainly been carried out using the Adult Attachment Interview and The Strange Situation, outlined in chapter one. Parents who were rated as secure and autonomous were reported to have infants who were securely attached, when judged in the Strange Situation (Main, 1991).

By examining adolescents' own perceptions of their parents and parenting behaviour, it is possible to use this information to form the basis of individuals' own concepts of the parenting role. Individuals who have had bad experiences as a child, may be more likely to repeat this pattern of parenting with their own children. However, the effects of these experiences need not be stable and Main et al (1985) has reported adults, whose childhood attachments were insecure were able to work through these negative issues and become secure in their own parenting skills. There is evidence that the provision of psychotherapy for individuals who were maltreated as children can be an effective step against the repetition

of abusive parenting with their own children (Egeland, Jacobvitz and Stroufe, 1988).

4.5.4 Conclusions and future directions

In conclusion, this study examined the link between perceptions of parental relationships and various measures of psychological functioning. The study confirmed previous studies' findings that mothers are perceived differently from fathers and are generally viewed as more controlling and caring. Significant correlations were found between maternal control and self-esteem, positive affect and locus of control. Maternal care was positively correlated with positive affect. Paternal control was negatively correlated with self-esteem, positive affect and locus of control. Paternal care was negatively correlated with locus of control. Although it was expected that the control and care factors would have interactive relationships with other psychosocial measures, it would appear that control has the most effect with regards to these particular measures, rather than the particular combination of low control and high care that was originally predicted. The results also suggest that mothers and fathers play different roles with regard to self-esteem, positive affect and locus of control during late adolescence. It also confirms that the influence of fathers is as important as the influence of mothers.

The results of this study, although weak can confirm that the Parental Bonding Instrument does serve to assess general risk factors that are

associated with an individuals' susceptibility to developing problems. Perhaps further research needs to assess these characteristics and their ability to mediate the effects of dysfunctional parental relationships in predicting symptomology. Dysfunctional parental relationships result in an increased risk of developing psychological problems but future studies of parental relationships need to examine the stability of parent-child relationships. This would aid in the identification of the basis of successful development and the assessment of individuals' likelihood of developing psychological problems. Finally, although the research on risk and resilience factors is developing, there is a need for research to be made more readily available in order to implement initiatives and programmes to aid in the prevention of problems arising.

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Appendix I

A short version of the Parental Bonding Instrument for Adolescents

(Pedersen 1994)

A short version of the Parental Bonding Instrument for Adolescents
(Pedersen 1994)

The questionnaire lists various attitudes and behaviours of parents. Mark the bracket most appropriate for you.

- My father liked me to make my own decisions	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- He let me decide things for myself	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- He tried to control everything I did	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- He tended to baby me	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- He was overprotective	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- He did not talk with me very much	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- He was affectionate to me	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- He appeared to understand my problems and worries	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- He did not help me as much as I needed	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- He did not understand what I needed and wanted	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>

Appendices

- My mother liked me to make my own decisions	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- She let me decide things for myself	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- She tried to control everything I did	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- She tended to baby me	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- She was overprotective	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- She did not talk with me very much	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- She was affectionate to me	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- She appeared to understand my problems and worries	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- She did not help me as much as I needed	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
- She did not understand what I needed and wanted	<i>Strongly agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly disagree</i>

Appendix II

Culture Free-Self-Esteem Inventory (2nd Edition)

(Battle 1992)

CFSEI-2

Culture-Free
Self-Esteem
Inventories
Second Edition

FORM AD

Age _____ Date _____

Location _____

Examiner _____ Total _____ G _____ S _____ P _____ L _____

Directions

Please mark each question in the following way: If the question describes how you usually feel, make check mark (✓) in the "yes" column. If the question does not describe how you usually feel, make a check mark (✓) in the "no" column. Check only one column (either yes or no) for each of the 40 questions. This is not a test, and there are no right or wrong answers.

Appendix III

Positive and Negative Affect Schedule (PANAS)

(Watson and Clark 1988)

The PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Please indicate to what extent you have felt this way during the past week.

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a bit	extremely
_____ interested			_____ irritable	
_____ distressed			_____ alert	
_____ excited			_____ ashamed	
_____ upset			_____ inspired	
_____ strong			_____ nervous	
_____ guilty			_____ determined	
_____ scared			_____ attentive	
_____ hostile			_____ jittery	
_____ enthusiastic			_____ active	
_____ proud			_____ afraid	

Appendix IV

Locus of Control Scale for Children

(Norwicki and Strickland 1973)

LOCUS OF CONTROL SCALE FOR CHILDREN (LCSC)



Name: _____ Date of birth: _____

Date completed: _____

We are trying to find out what young people think about certain things. We want you to answer the following questions about the way you feel. There are no right or wrong answers. Don't take too much time answering any one question, but do try to answer them all.

One of your concerns during the test may be, 'What should I do if I can answer both yes and no to a question?' It is not unusual for that to happen. If it does, think about whether your answer is just a little more one way than the other. For example, if you would assign 51 per cent to 'yes' and 49 per cent to 'no', mark the answer 'yes'. Try to pick one or the other response for each of the questions and do not leave any blanks.

Tick yes or no next to each item. Thank you.

Do you believe that most problems will solve themselves if you just leave them?

Yes	No
-----	----

Do you believe that you can stop yourself from catching a cold?

Yes	No
-----	----

Are some people just born lucky?

Yes	No
-----	----

Most of the time do you feel that getting good marks at school means a great deal to you?

Yes	No
-----	----

Are you often blamed for things that aren't your fault?

Yes	No
-----	----

Do you believe that if somebody studies hard enough, he or she can pass any subject?

Yes	No
-----	----

Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway?

Yes	No
-----	----

Do you feel that if things start out well in the morning, it is going to be a good day no matter what you do?

Yes	No
-----	----

Do you feel that most of the time parents listen to what their children have to say?

Yes	No
-----	----

Do you believe that wishing can make good things happen?

Yes	No
-----	----

When you get punished, does it usually seem it is for no good reason at all?

Yes	No
-----	----

Most of the time do you find it hard to change a friend's (mind) opinion?

Yes	No
-----	----

Do you feel that cheering, more than luck, helps a team to win?

Yes	No
-----	----

Do you feel that it is nearly impossible to change your parents' mind about anything?

Yes	No
-----	----

Do you believe that your parents should allow you to make most of your own decisions?

Yes	No
-----	----

Do you feel that when you do something wrong there is very little you can do to make it right?

Yes	No
-----	----

Do you believe that most people are just born good at sports?

Yes	No
-----	----

Are most of the other people your age stronger than you are?

Yes	No
-----	----



19. Do you feel that one of the best ways to handle most problems is just not to think about them?
20. Do you feel you have a lot of choice in deciding who your friends are?
21. If you find a four-leaf clover, do you believe that it might bring you good luck?
22. Do you often feel that whether you do your homework has much to do with what kind of marks you get?
23. Do you feel that when someone your age decides to hit you, there is little you can do to stop him or her?
24. Have you ever had a good luck charm?
25. Do you believe that whether or not people like you depends on how you behave?
26. Will your parents usually help you if you ask them to?
27. Have you felt that when people were mean to you it was usually for no reason at all?
28. Most of the time, do you feel that you can change what might happen tomorrow by what you do today?
29. Do you believe that when bad things are going to happen they are going to happen no matter what you try to do to stop them?
30. Do you think that people can get their own way if they just keep trying?
31. Most of the time do you find it useless to try to get your own way at home?
32. Do you feel that when good things happen they happen because of hard work?
33. Do you feel that when somebody your age wants to be your enemy there is little that you can do to change matters?
34. Do you feel that it is easy to get friends to do what you want them to do?
35. Do you usually feel that you have little to say about what you eat at home?
36. Do you feel that when someone doesn't like you there is little you can do about it?
37. Do you usually feel that it is almost useless to try in school because most other children are cleverer?
38. Are you the kind of person who believes that planning ahead makes things turn out better?
39. Most of the time, do you feel that you have little to say about what your family decides to do?
40. Do you feel it is better to be clever than to be lucky?

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No

Yes No



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Appendix V

Study Information Sheet for Participants

Perceptions of parental bonding and the relationship with self-esteem, locus of control and affect in adolescents.

Study Information Sheet for Participants

I am a Clinical Psychologist in training. Psychology is concerned about how people think and behave and Clinical Psychologists are employed by the Health Service to help individuals with worries and difficulties they may be experiencing. As part of my training I am completing a study to look at factors which may protect people from developing psychological problems. I would be grateful if you would consider participating in this study. The following information is given to help you decide whether you would like to take part in the study.

The aim of this study is to examine the relationship between your perceptions of your parents and measures of self-esteem, affect (which is a measure of mood), locus of control (which is how much you believe something is under your control). Participation in this study would aid greatly in adding to information regarding problem development in young people.

If you decide to take part, please complete the consent form enclosed. Please do not include any information about yourself other than your age and sex. There are four questionnaires and they will each take approximately 5-10 minutes to complete. These are not tests and require yes/no answers or circling a phrase which applies to you. All the information collected will be completely anonymous and confidential and no one else will have access to the data. Participation in this study is entirely voluntary and you are free to withdraw from the study at any time you wish.

If you have any further questions or concerns, please contact me:-

Emma Robinson
Tayside Area Clinical Psychology Department
Child Health Team
Pitcullen House
Murray Royal Hospital

Thank-you for your help in completing this study.

Appendix VI

Consent Form

Perceptions of parental bonding and the relationship with self –esteem, locus of control and affect in adolescents.

Consent Form

PLEASE CROSS OUT AS NECESSARY

Have you read the Information Sheet? YES/NO

Have you received enough information about the study? YES/NO

Do you understand that participation is entirely voluntary? YES/NO

Do you understand that you are free to withdraw from the study:

*** at any time?**
*** without having to give a reason for withdrawing? YES/NO**

Do you agree to take part in this study? YES/NO

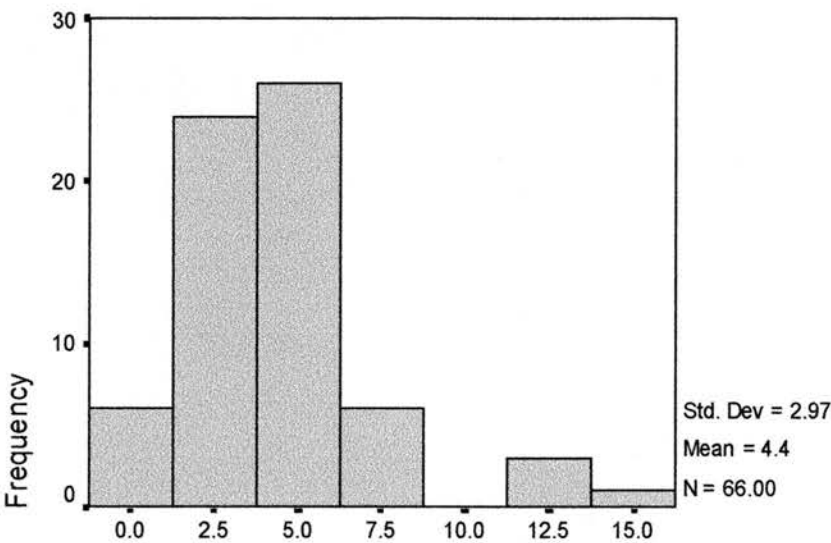
Appendix VII

Exploratory Data Analysis

Frequency Histograms

Histogram

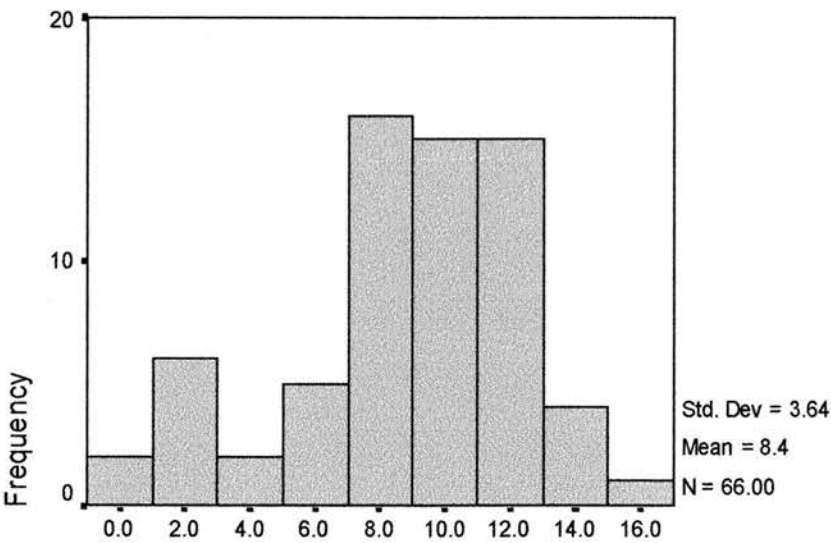
PBI Paternal Control



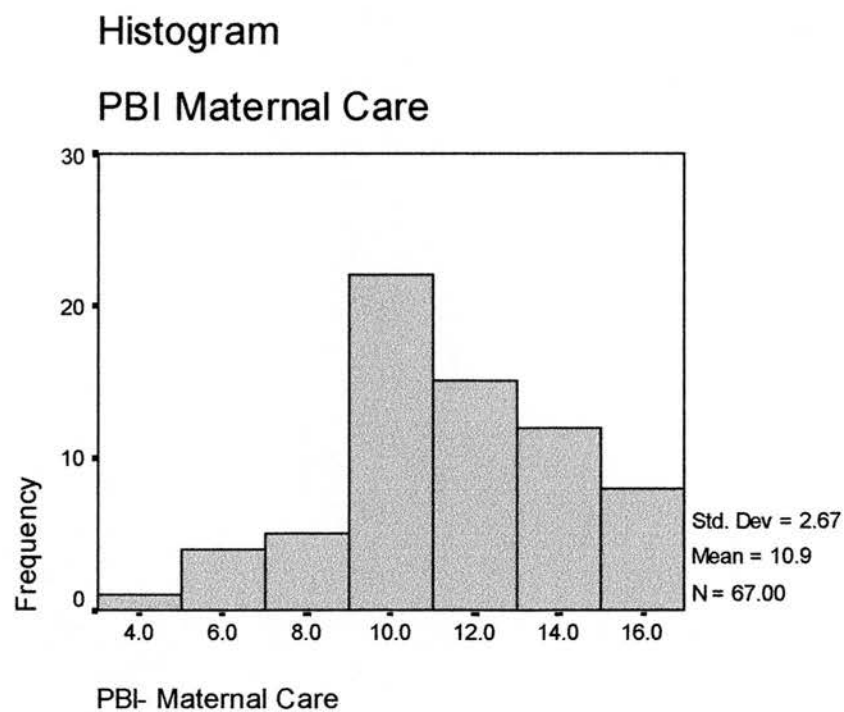
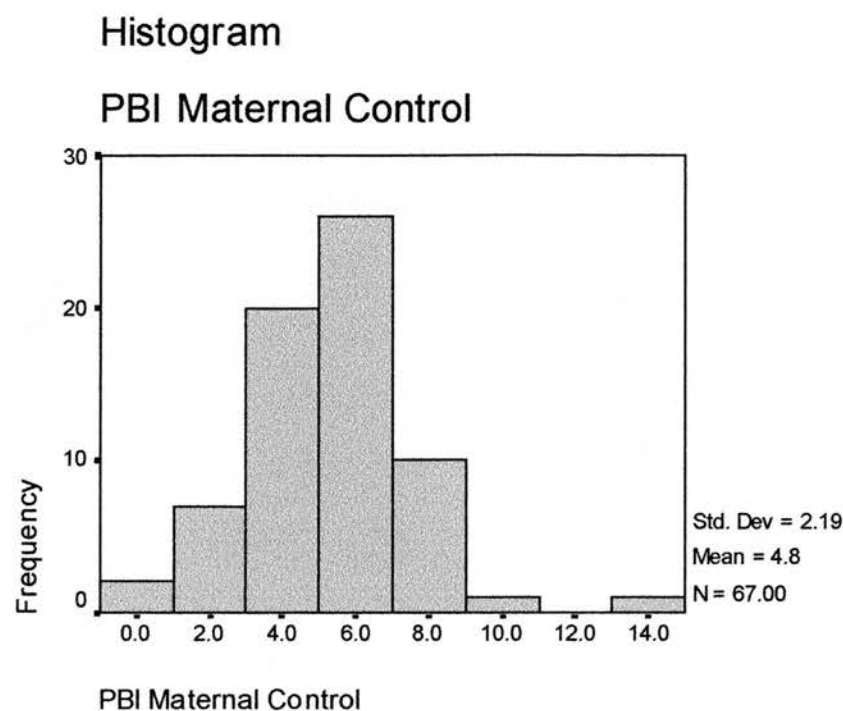
PBI Paternal Control

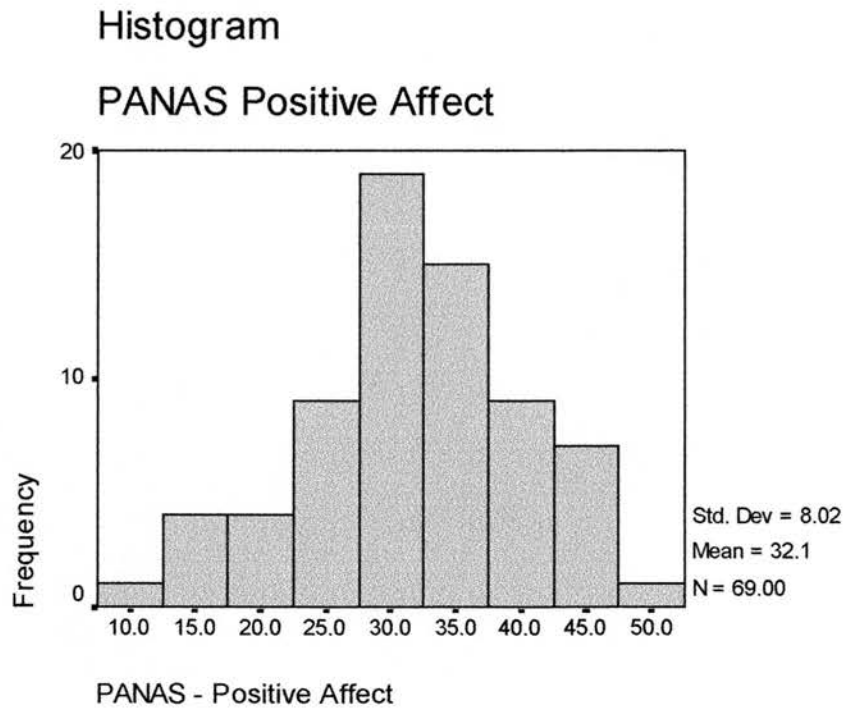
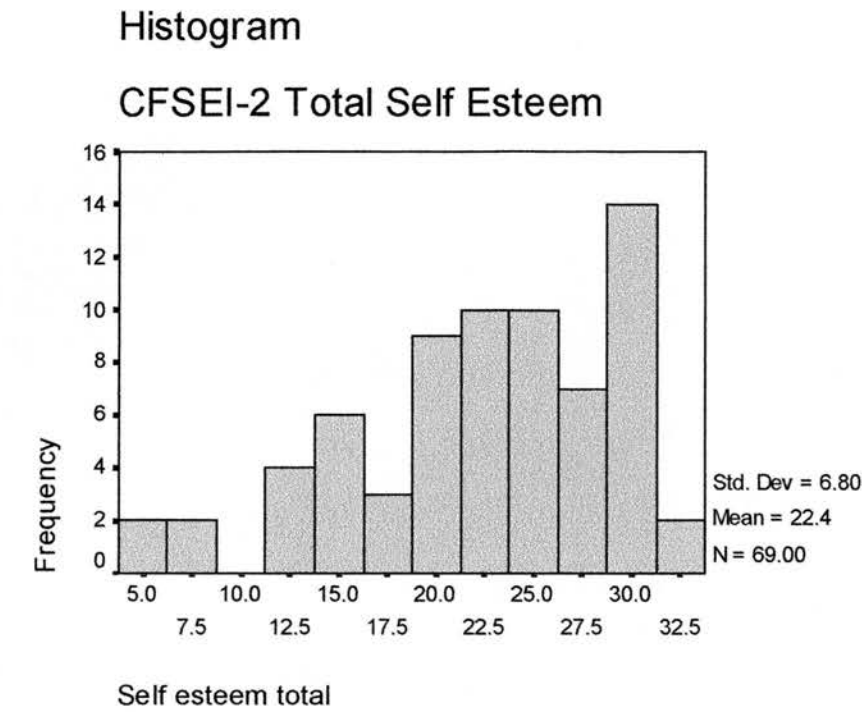
Histogram

PBI Paternal Care



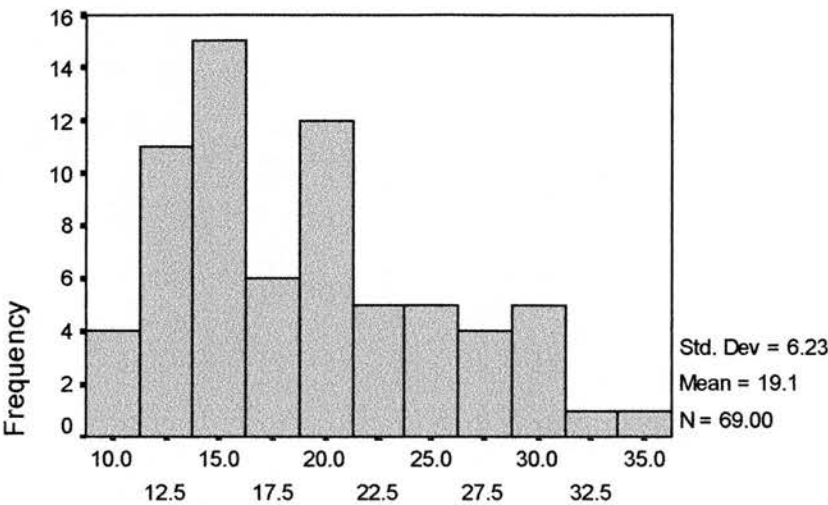
PBI Paternal Care





Histogram

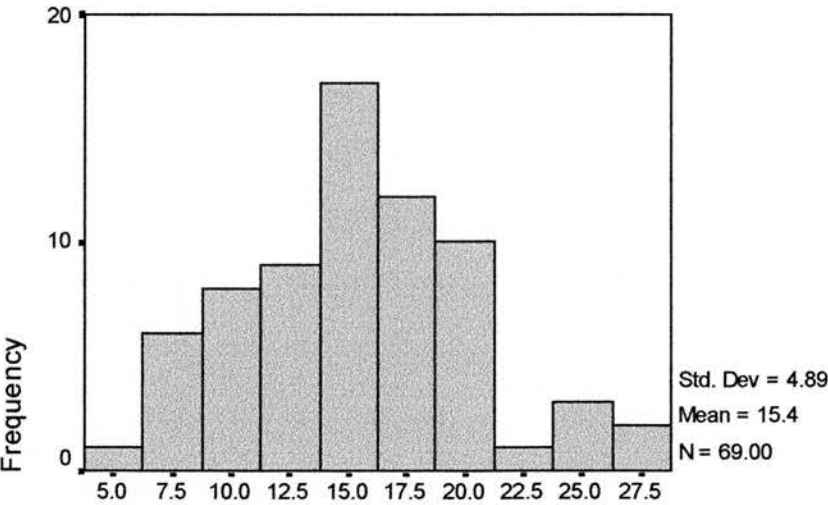
PANAS Negative Affect



PANAS-Negative Affect

Histogram

LCSC



locus of control

Appendix VIII

Scatter diagrams

Adolescents' perceptions of maternal and paternal bonding.

Figure 1

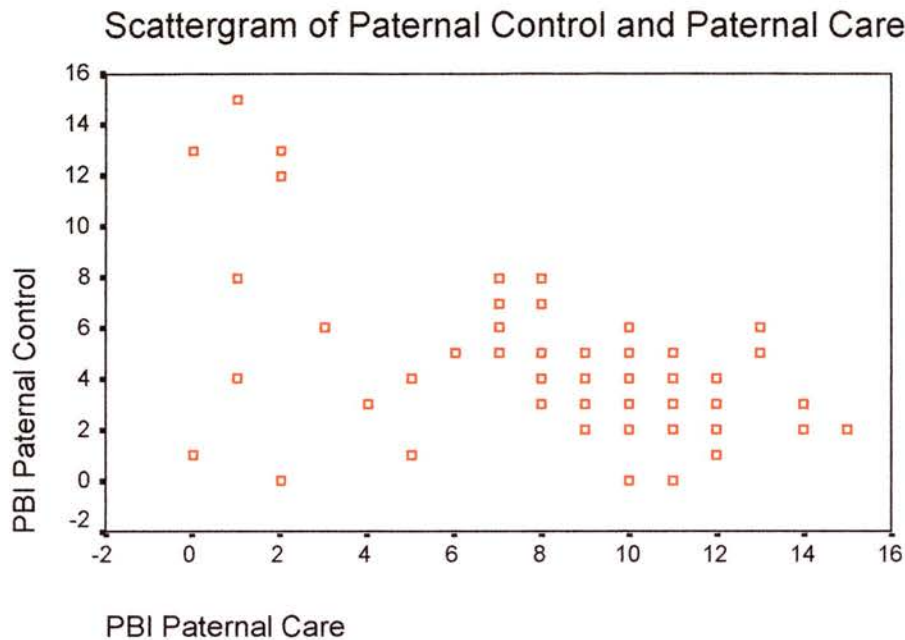


Figure 2

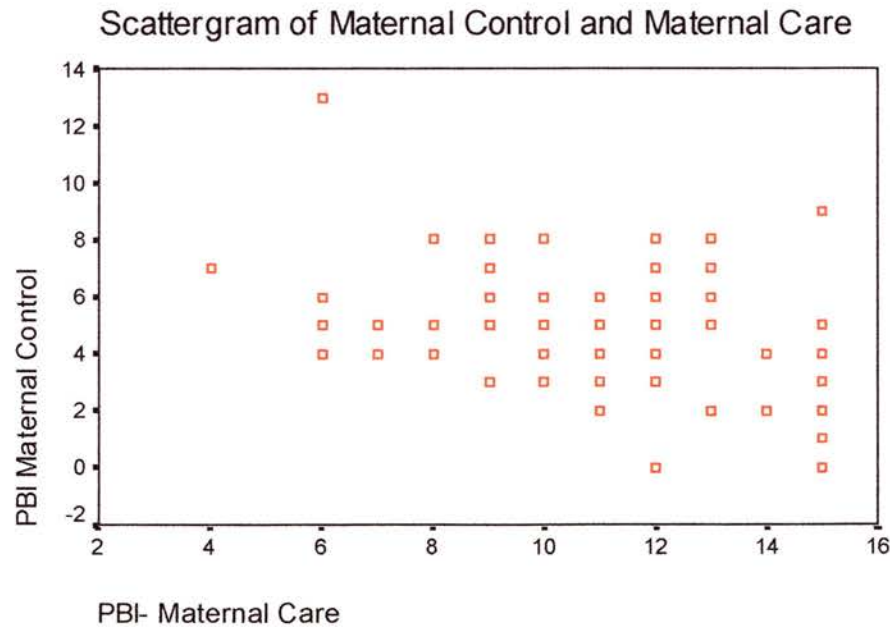


Figure 3

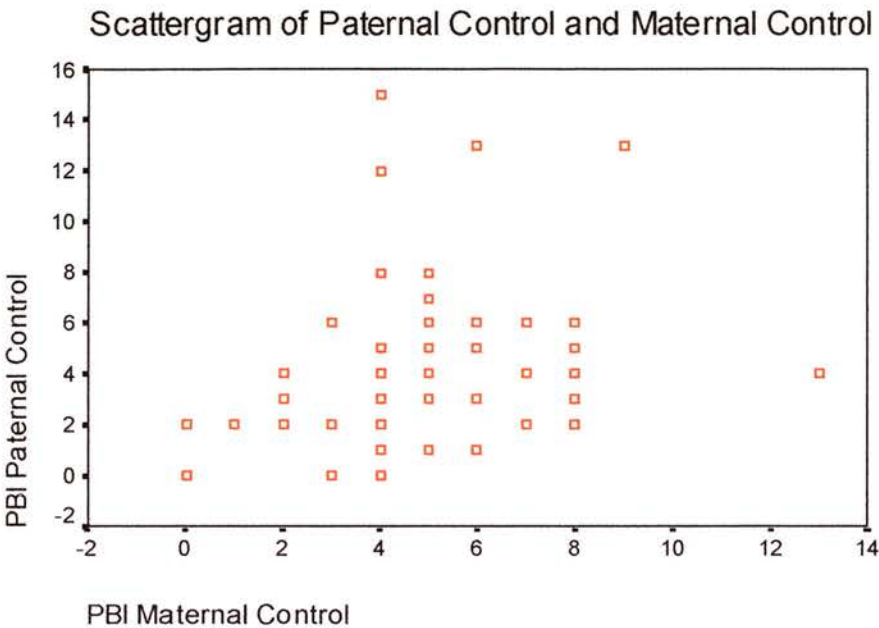
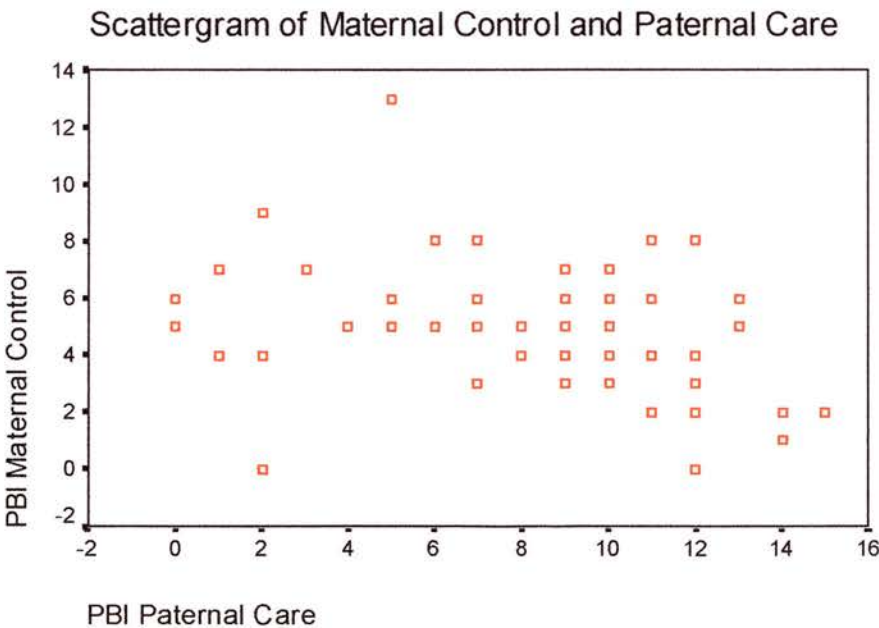


Figure 4



Appendix IX

Scatter diagrams

Adolecents' perceptions of parental relationships and self-esteem, positive and negative affect and locus of control

Figure 5

Scattergram of Paternal Control and Self-Esteem

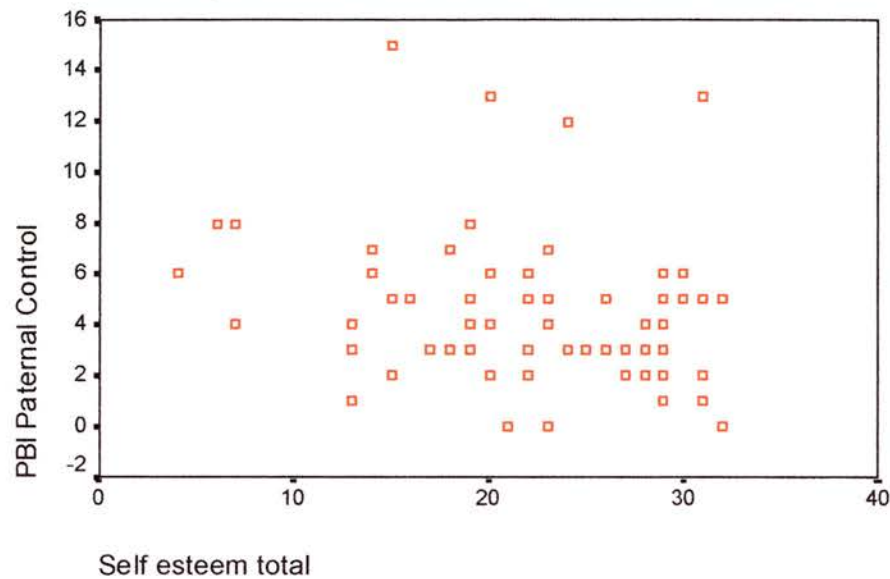


Figure 6

Scattergram of Maternal Control and Self-Esteem

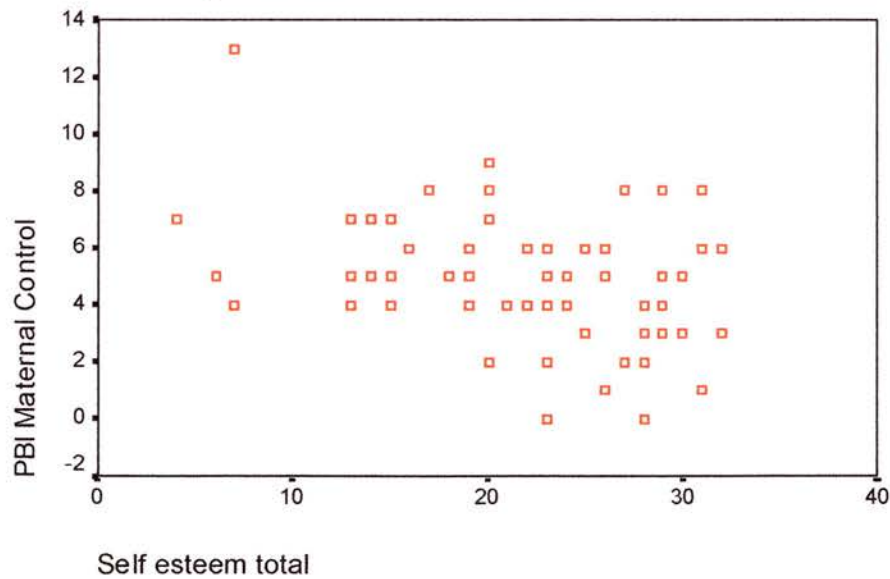


Figure 7

Scattergram of Paternal Control and Positive Affect

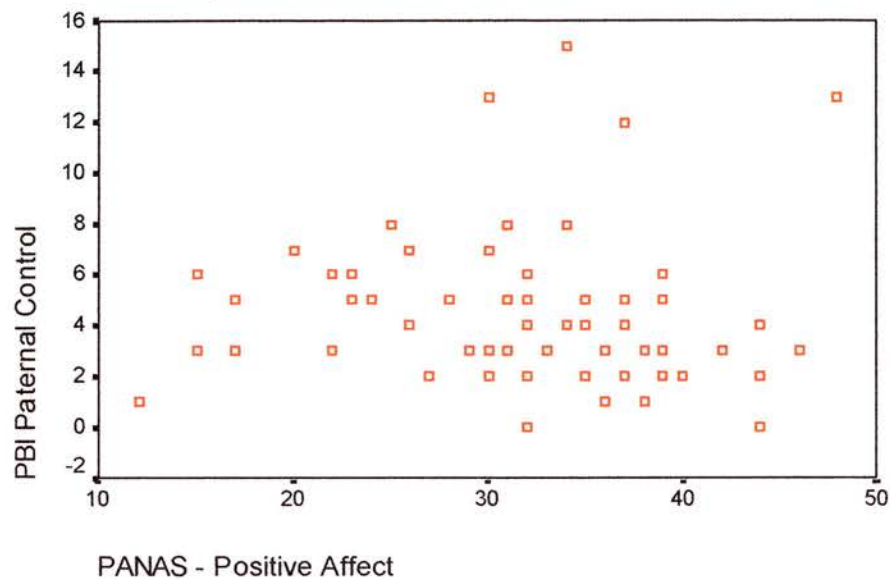


Figure 8

Scattergram of Maternal Control and Positive Affect

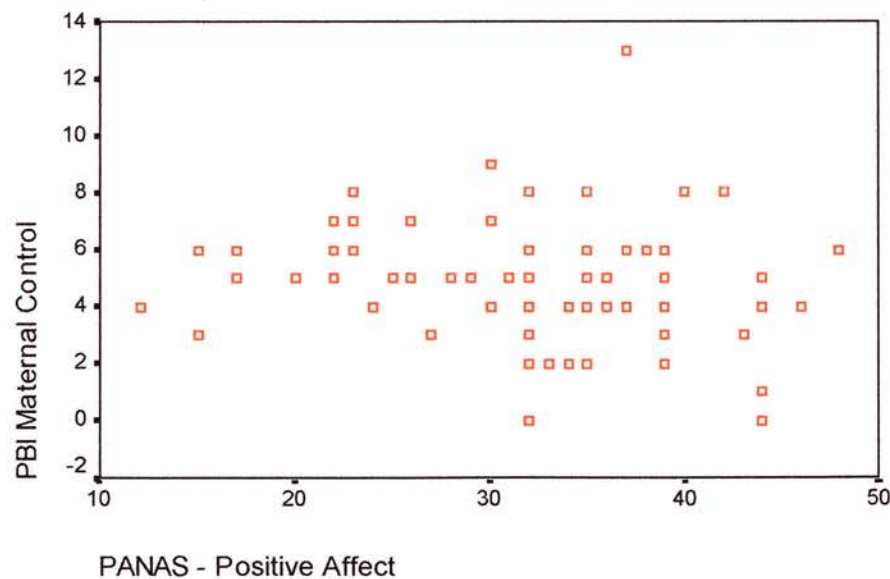


Figure 9

Scattergram of Maternal Care and Positive Affect

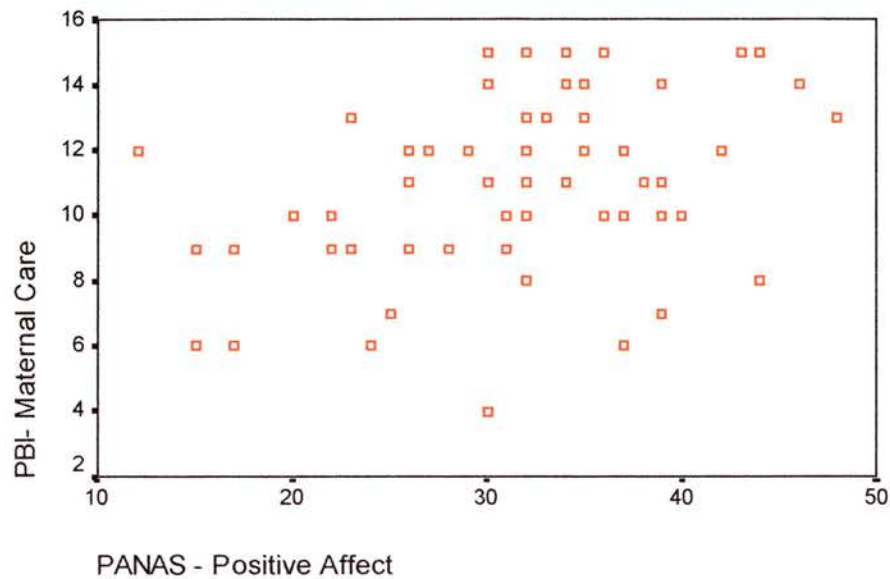


Figure 10

Scattergram of Paternal Control and Locus of Control

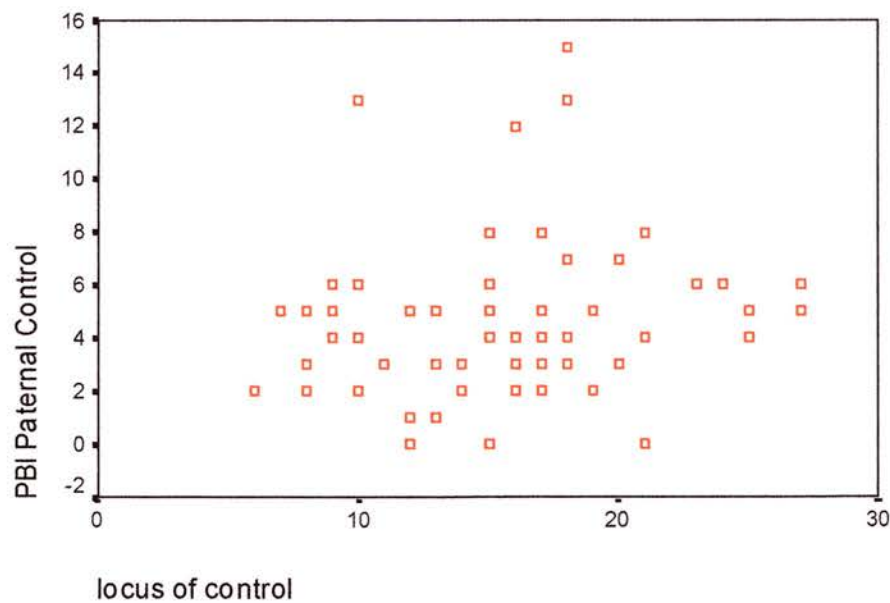


Figure 11

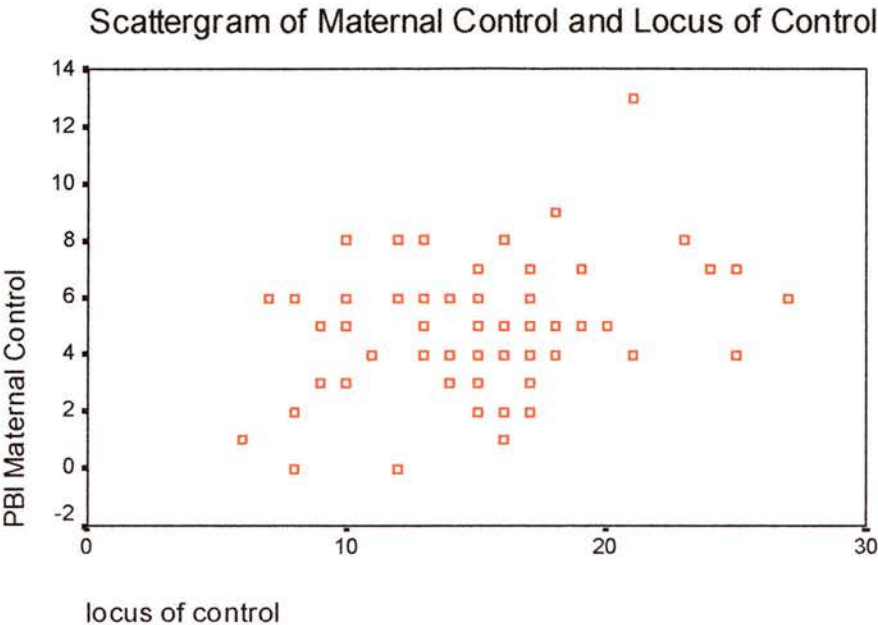
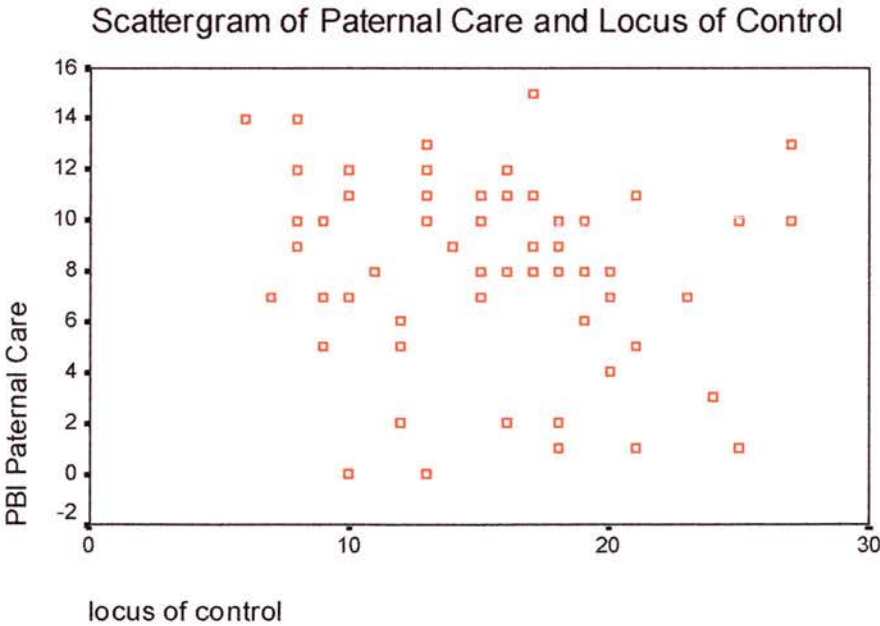


Figure 12



Appendix X

Table of proportion of variance accounted for by correlation coefficients

Table of proportion of variance accounted for by correlation coefficients

Variables	Correlation rho	Correlation squared rho²	Variance accounted for
Maternal Control and Self-Esteem	rho = -.25	rho ² = -.25 ²	0.06 (6%)
Paternal Control and Self-Esteem	rho = -.24	rho ² = -.24 ²	0.06 (6%)
Paternal Control and Positive Affect	rho = -.25	rho ² = -.25 ²	0.06 (6%)
Maternal Control and Positive Affect	rho = -.25	rho ² = -.25 ²	0.06 (6%)
Maternal Care and Positive Affect	rho = .38	rho ² = .38 ²	0.14 (14%)
Paternal Control and Locus of Control	rho = .27	rho ² = .27 ²	0.07 (7%)
Maternal Control and Locus of Control	rho = .25	rho ² = .25 ²	0.06 (6%)
Paternal Care and Locus of Control	rho = -.22	rho ² = .22 ²	0.05 (5%)